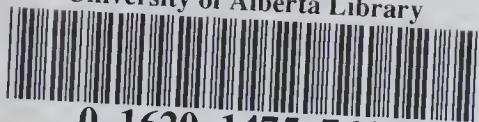


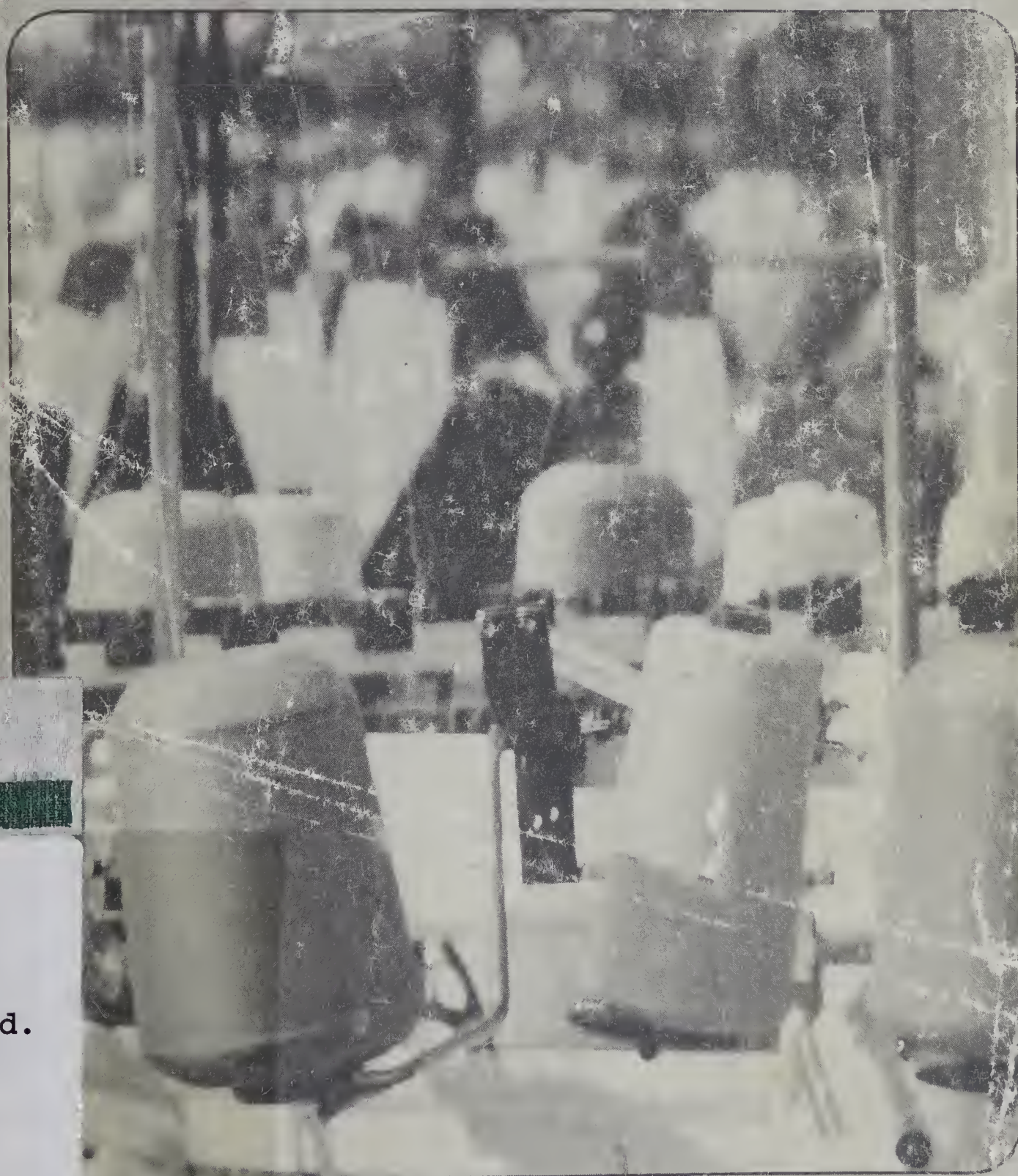
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THE IMPACT OF THE INDUSTRIAL REVOLUTION

TEACHING GUIDE



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THE IMPACT OF THE INDUSTRIAL REVOLUTION

NICHOLAS B. FESSENDEN

TEACHING GUIDE



HARCOURT BRACE JOVANOVIH

New York Chicago San Francisco Atlanta Dallas and London

TO THE TEACHER

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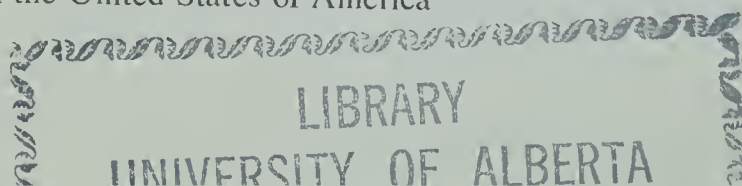
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CONTENTS

Basic Features of the Textbook	1
Organization of the Text	
Uses of the Text	
Basic Features of This Manual	3
References for the Teacher	4
Audio-Visual Materials	6
Audio-Visual Sources	
Introduction	10
About This Unit	11
Part 1. Life in England:	
* Before the Industrial Revolution	13
Lesson 1:	Two Families: The Moores and the Whitefields
Lesson 2:	How the Moores and Whitefields Spend Their Earnings
Lesson 3:	The Changing Countryside
Lesson 4:	The Enclosure of Farmington
Lesson 5:	Results for the Thompsons
Lesson 6:	How Enclosure Affected the Moores and the Whitefields
Lesson 7:	Results: The Bigger Picture
Lesson 8:	Should These Changes Have Been Made?

Part 2. Forces of Change:

The Industrial Revolution 35

- Lesson 9: Introduction
- Lesson 10: Problems and Solutions
- Lesson 11: The Story of Richard Arkwright
- Lesson 12: The Story of Samuel Crompton
- Lesson 13: The Inventor and the Industry
- Lesson 14: Solving the Problem of Power
- Lesson 15: Ingredients of Industrialization
- Lesson 16: What Happened to the Weavers?
- Lesson 17: The Revolution in Iron
- Lesson 18: Inventions and Their Applications

Part 3. Costs and Benefits:

Effects of Industrialization 58

- Lesson 19: The Debate: The Opening Statements
- Lesson 20: The Argument Over Population
- Lesson 21: The Argument Over Living Conditions
- Lesson 22: The Argument Over Wages and Prices
- Lesson 23: The Argument Over Child Labor
- Lesson 24: The Concluding Statements of the Debate
- Lesson 25: Reactions to the Industrial Revolution
- Lesson 26: The Industrial Revolution Today

BASIC FEATURES OF THE TEXTBOOK

The Industrial Revolution was one of the most significant events of modern history. The series of profound changes that began 200 years ago in England continues to have consequences for today's world.

The Impact of the Industrial Revolution explains these changes in a lively style and a dynamic format. The book uses case studies of fictional people or situations to illustrate important agricultural and technological changes, and the impact of these changes on individuals. These fictional case studies were created from actual historical documents and information. Other evidence in the Unit includes letters, journals, pamphlets, government investigations, and interpretations by modern historians. Maps, charts, tables, colorful photographs, and reproductions of paintings and engravings further reinforce the content of the book. Students come to understand how the process of industrialization occurred, and how it affected different groups of people. From the evidence, students can also consider the benefits and costs of the Industrial Revolution to society as a whole.

Throughout the Unit, there are numerous questions and activities for the student. Some appear in blue in the margins; others come at the ends of lessons. They enable students to review the facts presented in the text, and—always—to consider the implications of industrialization. Students are encouraged to reason, compare, evaluate, and arrive at their own conclusions.

Organization of the Text

The book is divided into an introductory section, three Parts, and a Research Bank. The introductory section consists of the *Introduction* and four pages titled *About this Unit*. This section introduces the students to the concept of industrialization, considers its importance throughout the world, and directs the students' attention to England at the start of the Industrial Revolution.

Part 1, "Life in England: Before the Industrial Revolution," describes the lives of people in the English countryside during the 1700's. Part 1 uses a fictional case study of three families in the village of Farmington—the Moores, Whitefields, and Thompsons. Through an examination of the different ways of life and work of each of these families, the students can consider the advan-

tages and disadvantages of life before industrialization. The process of enclosure, a major change in rural land use in England at the end of the 1700's, is described. Its impact is discussed by the fictional characters and by actual observers of the time.

Part 2, "Forces of Change: The Industrial Revolution," discusses the inventions and technological advances in the growth of the cotton industry. It analyzes the contributions of such inventions as the spinning jenny, the frame, the mule, and the power loom, and the effects of these inventions on the handloom weavers. This Part also describes two other advances—the development of James Watt's steam engine and the improvements in iron production—and examines their impact on England's industrialization process.

In Part 3, "Costs and Benefits: Effects of Industrialization," two fictional debaters in 1851 consider the effects of the Industrial Revolution. Each debater interprets the evidence to bolster his own arguments. Topics in the debate include living conditions in the cities, population trends, child labor, and wages and prices. Students are asked to weigh the evidence and the arguments, and then to decide for themselves which of the debaters presents the strongest case. Part 3 also discusses some reactions to industrialization by various groups in England during the 1800's. It concludes with a discussion of the costs and benefits of industrialization to developing nations today.

The Research Bank, a 32-page section of readings, follows. It provides additional readings and illustrations that supplement and reinforce the evidence in the text. The Research Bank is organized in three Parts that coincide with the Parts of the main text. Readings are preceded by descriptive introductions and questions and are keyed to the lessons in the Unit by arrows at the bottom of pages. Teachers may assign Research Bank readings as homework, for extra credit, or for in-class reading and discussion.

Uses of the Text

The Impact of the Industrial Revolution may be used in a variety of high school courses. It can serve as a text for part of a World History or European History course, or as the text in an elective or mini-course on the Industrial Revolution. Teachers can also use it as a supplement to their American History courses in order to explain concurrent events in England during the early years of the republic. The book's discussion of such economic principles as budgeting or wage and price indexes could prove an interesting addition to a basic economics course.

The Impact of the Industrial Revolution explains the facts behind the Industrial Revolution in England, but it also encourages students to apply these facts to their own lives. It thus provides enrichment and lends variety to the teaching of history.

BASIC FEATURES OF THE MANUAL

The purpose of this manual is to help you reinforce the content and concepts presented in the text, apply historical evidence to situations in the students' environment, and evaluate student learning. The manual offers a variety of ideas that you may find useful in teaching your course.

The manual contains a list of readings on the history of the Industrial Revolution and a list of audio-visual materials for use with each Part of the text. In addition, it provides detailed information, activities, and questions for every lesson, or topic, in the text, and suggestions for using the Research Bank. Each lesson can take one or several days to complete, depending on how many of the activities and evaluation exercises you choose to use.

The material for each lesson is organized as follows:

- Overview of the Lesson
- Learning Objectives
- Key Words and Ideas
- Historical Background
- Activities and Projects
- Using the Textbook Questions
- Evaluating Student Progress

The suggested activities include ideas for individual research projects, class discussion, small group activities, field trips, opinion polls, outside speakers, class debate, and map-reading exercises. Many can be completed during one class period. The questions for evaluating student progress consist of both multiple-choice and essay-type questions of varying degrees of difficulty. You can use them to prepare quizzes, end-of-Part tests, or a final examination. Or you may find the essay items useful for class discussion or homework assignments.

The photographs, drawings, maps, charts, and tables throughout the book provide ample material for study and discussion. They may be used to enrich and reinforce each lesson. For instance, the photographs that open the book are an excellent introduction to the theme and content. A discussion of these photos may generate student interest and motivate students to consider the effects of industrialization on their lives.

It is hoped that these suggestions will assist you in using the textbook in the most productive and rewarding way for your students.

REFERENCES FOR THE TEACHER

- Ashton, Thomas S., *The Industrial Revolution: 1760–1830*. London: Oxford University Press. A classic account of the Industrial Revolution, with special emphasis on technological change.
- Ashton, Thomas S., *Iron and Steel in the Industrial Revolution*. Fairfield, New Jersey: Augustus M. Kelley, Publishers. A straightforward narrative of the changes in iron and steel technology.
- Bowden, Witt, *Industrial Society in England Towards the End of the Eighteenth Century*. New York: Harper & Row, Barnes and Noble Books. The beginnings of industrialization in the 1700's, with specific information about workers' living standards.
- Briggs, Asa, *The Making of Modern England, 1783–1867: The Age of Improvement*. New York: Harper & Row. A general survey of the political background of the Industrial Revolution.
- Chambers, J. D. and Mingay, G. E., *The Agricultural Revolution, 1750–1880*. London: B. T. Batsford Ltd. In this study, two scholars contend that the cottagers benefited from enclosure.
- Clapham, John H., *An Economic History of Modern Britain*. London: Cambridge University Press. Volume I contains information about different aspects of Great Britain's economy during the years 1820–1850.
- Deane, Phyllis, *The First Industrial Revolution*. London: Cambridge University Press. An excellent survey dealing with the economic, political, and social background of the Industrial Revolution in England.
- DeFoe, Daniel, *A Tour Through the Whole Island of Great Britain*. New York: E. P. Dutton & Co. This journal of the famous author's travels contains vivid descriptions of British life and work in the early 1700's.
- Doty, Stewart C., ed., *The Industrial Revolution* (European Problem Studies). New York: Holt, Rinehart and Winston, Inc. A college textbook that offers a good introduction to the controversy over the costs and benefits of the Industrial Revolution.
- George, Dorothy M., *England in Transition*. New York: Penguin Books (paper). A concise account of England's politics, economy, and society in the 1700's.
- Hammond, J. L. and Barbara, *The Village Labourer, 1760–1832: A Study in the Government of England Before the Reform Bill*. Fairfield, New Jersey: Augustus M. Kelley, Publishers. Two well-known scholars discuss the effect of enclosure on rural laborers.

- Hobsbawm, E. J., *The Age of Revolution: Seventeen Eighty-Nine to Eighteen Forty-Eight*. New York: Mentor Books. Imprint of New American Library (paper). A view of the implications of industrialization and political revolution throughout Europe.
- Laslett, Peter, *The World We Have Lost*. New York: Charles Scribner's Sons. An original and carefully researched statement about the demography, customs, family structure, economy, and politics of pre-industrial England.
- Mingay, G. E., *English Landed Society in the Nineteenth Century*. Toronto: University of Toronto Press. A study which concludes that large landowners retained political and economic leadership throughout the 1800's.
- Pinchbeck, Ivy, *Women Workers and the Industrial Revolution*. Fairfield, New Jersey: Augustus M. Kelley, Publishers. A description of the lives of working women before and during the Industrial Revolution, with a discussion of women in agriculture as well as industry.
- Thompson, E. P., *The Making of the English Working Class*. New York: Random House. A massive and sympathetic account of working-class movements from 1790 to the 1830's, with chapters on the Luddites and on workers' religious movements, such as the Shakers and the Methodists.
- Wilson, Edmund, *To the Finland Station: A Study in the Writing and Acting of History*. Garden City, N.Y.: Doubleday & Company, Inc. A history of socialist thought by a famous American critic, with several chapters on Robert Owen, Karl Marx, and Friedrich Engels.

AUDIO-VISUAL MATERIALS

This list of films, filmstrips, records, kits, and cassettes may be useful to you in teaching the lessons in the textbook. The materials are arranged under the headings Introduction, Parts 1, 2, and 3 to parallel the organization of the text. In several cases, more than one source is listed for an audio-visual material. A list of the audio-visual sources mentioned here, along with their addresses, appears on pages 8–9.

Introduction

These audio-visual materials provide a good overview of the Industrial Revolution.

The Drive for Power (Film. 53 min., color, Part VIII of The Ascent of Man series, Time-Life Films.) Jacob Bronowski discusses the attitudes that led to the Industrial Revolution.

The Industrial Revolution (Filmstrip. Educational Audio-Visual Inc. or Social Studies School Service.) Presents a broad overview of the social and economic effects of the Industrial Revolution and its spread throughout the world.

Man and the Industrial Revolution (Film. 20 min., color, McGraw-Hill Films.) Describes the processes of technology and social change and outlines the factors contributing to the rise of the Industrial Revolution in England and other parts of Europe. Concludes with a discussion of the social, economic, and political consequences of industrialization.

Part 1. Life in England: Before the Industrial Revolution

The Age of Enlightenment (12 transparencies and 12 duplicating masters. Milliken Publishing Co.) Covers economic and social questions of the 1700's – the age of reason, patterns of government, the start of the Industrial Revolution, artisan handiwork, the role of women, and the lifestyles of the rich and poor.

Dr. Johnson's London (Filmstrip available with one record or two cassettes. Educational Audio-Visual Inc. or Multi-Media Productions Inc.) Uses paintings, engravings, and prints by several English artists of the 1700's to portray the wide differences of life in London.

England in Revolution (Filmstrip. Multi-Media Productions Inc. or Social Studies School Service.) Traces the political upheavals of the 1600's and the resulting supremacy of Parliament over the Stuart kings.

The London of William Hogarth (Film. 27 min., color, McGraw-Hill Films.) Using the cartoons of this famous caricaturist, this film presents the everyday life of London's citizens in the 1700's.

Looking Into History (Set of 16 filmstrips. Visual Publications.) This set of 16 filmstrips covers English history from Norman to Victorian times. Two of the filmstrips on Georgian England (PD11 & PD12) use architectural styles of the period, tapestries, paintings, personal and household items, manuscripts, and journals to discuss social and political history of Great Britain in the 1700's.

Part 2. Forces of Change: The Industrial Revolution

England and the Napoleonic Wars (Cassette. Listening Library Inc.) Discusses England's politics and foreign policy in the early 1800's.

The Industrial Revolution (Series of wall charts. Social Studies School Service.) Chart 1 of the series illustrates the changes in the textile industry during the 1700's and 1800's. Chart 2 focuses on the contrasts between the cottage industries and the factory system. Chart 5 pictures the development of better methods of transportation.

The Industrial Revolution in England (Film. 26 min., color, Learning Corporation of America.) Examines such technological changes in England during the 1800's as the new factory system and the impact of the spinning jenny, the power loom, and the steam engine on manufacturing.

The Meaning of the Industrial Revolution (Film. 10 min., color, Coronet Instructional Media.) Describes the change from hand tools to power tools and the replacement of water power with steam power.

James Watt and Steam Power (Kit of visuals. Jackdaw Publications Ltd. or Social Studies School Service.) This kit of documents, letters, and engravings places Watt's contributions in historical perspective by showing the attempts to harness steam power before Watt's improvement of the engine and the subsequent uses of steam power.

Part 3. Costs and Benefits: Effects of Industrialization

The Changing World of Charles Dickens (Two filmstrips with two cassettes. Social Studies School Service.) Describes Dickens' use of characters and plot to interpret the social problems caused by industrialization.

The Early Trade Unions (Kit of visuals. Jackdaw Publications Ltd.) Provides documents and engravings on the workers' reactions to industrialization and their early attempts at unionization.

The Ideas of Karl Marx (Two filmstrips with two cassettes or record. Educational Audio-Visual Inc., Listening Library Inc., or Social Studies School

- Service.) Discusses Marx in the historical context of the early and mid-1800's, focusing on his ideology and the feasibility of his ideas. These filmstrips also provide definitions of capitalism, socialism, and communism.
- The Philosophy of the Industrial Revolution* (Two filmstrips with record or cassettes. Listening Library, Inc.) Analyzes the social, political, and economic effects of the Industrial Revolution and the various ideological reactions to it.
- The Romantic Age in English Literature* (Two filmstrips with two records or two cassettes. Guidance Associates.) Places the lives and works of the famous English romantic poets—Byron, Shelley, Keats, and Wordsworth—into historical context.
- Shaftesbury and the Working Children* (Kit of visuals. Jackdaw Publications Ltd.) Contains maps, illustrations, diagrams, and excerpts from parliamentary commission reports to describe child labor in Great Britain during the 1800's. It also focuses on the Earl of Shaftesbury, one of the leading reformers of the era, and his efforts to improve working conditions.
- The Victorian Age* (Two filmstrips with two records or two cassettes. Guidance Associates.) Explores the conflicts that were central to the Industrial Revolution during Queen Victoria's reign through the works of the major literary figures of the time.
- The Vote: 1832–1928* (Kit of visuals. Jackdaw Publications Ltd.) Describes the Reform Bill of 1832, the Chartist agitation, and the extension of the right to vote after 1850 through engravings, charts, and historical documents.

AUDIO-VISUAL SOURCES

- | | |
|---|---|
| Coronet Instructional Media
65 East South Water Street
Chicago, Illinois 60601 | McGraw-Hill Films
1221 Avenue of the Americas
New York, N.Y. 10020 |
| Educational Audio-Visual Inc.
Pleasantville, N.Y. 10570 | Milliken Publishing Co.
1100 Research Boulevard
St. Louis, Mo. 63132 |
| Guidance Associates
757 Third Avenue
New York, N.Y. 10017 | Multi-Media Productions Inc.
P.O. Box 5097
Stanford, Calif. 94305 |
| Jackdaw Publications Ltd.
Distributed by:
Grossman Publishers
625 Madison Avenue
New York, N.Y. 10022 | Social Studies School Service
10,000 Culver Blvd.
P.O. Box 802
Culver City, Calif. 90230 |
| Learning Corporation of America
1350 Avenue of the Americas
New York, N.Y. 10019 | Time-Life Films
Multimedia Div.
100 Eisenhower Drive
Paramus, N.J. 07652 |
| Listening Library, Inc.
1 Park Avenue
Old Greenwich, Conn. 06870 | Visual Publications
716 Center Street
Lewiston, N. Y., 14092 |

Theme and Overview

Over the past 200 years, industrialization has brought countless changes to people's lives — changes that we take for granted. Our happiness and well-being depend on many of the products of industrialization. The pictures on text pages 2–3 encourage students to think about the requirements for their own happiness. These requirements include not only material goods, but also such intangibles as friendship and a happy family life. The introduction also focuses on the problems, as well as the benefits, of industrialization. The activity and pictures on text pages 4–5 encourage students to think about this basic theme of the Unit.

Learning Objectives

- To identify some requirements for happiness in today's world.
- To gain an understanding of the impact of industrialization.
- To be aware of both the costs and benefits of industrialization.

Key Words and Ideas

The following key words and ideas are introduced here; they are treated in greater detail in subsequent lessons.

industrialization

machines

technology

Activities and Projects

Class discussion. It is valuable for students to be able to read pictures as evidence. Using the pictures on text pages 2–3, initiate a discussion of the material and emotional factors in these pictures. What do the students recognize as material sources of happiness? What do they recognize as non-material requirements for happiness? What kinds of lives do the people in the pictures seem to lead? Students should recognize the benefits and problems of industrialization in each picture on text page 4. For instance, the rig in the top left-hand picture produces oil, a source of energy, but it also may produce polluting oil slicks. The cars in the bottom picture are sources of air pollution, but they are also a necessary means of transportation.

Using the Textbook Questions

Expressing Your Views: activity on text page 5. This activity and others throughout the Unit are effective means of reinforcing the ideas presented in the text. In this activity, you can use the first question as a take-off point for class discussion. The second question can be used for class discussion and as a writing activity.

ABOUT THIS UNIT (text pages 6–9)

Theme and Overview

This section introduces the basic questions of this Unit. It also considers England’s preeminent role in the Industrial Revolution. The map on text pages 6–7 depicts the spread of industrialization, beginning in England in the 1780’s and continuing into the 1970’s. Next, there is a brief explanation of the types of evidence that will be used in this Unit—evidence from the lives of people who lived in England during the Industrial Revolution; statistics on land, jobs, and money; and case studies of “typical” people of the time. The student’s role as interpreter and judge of historical events is discussed. The questions at the bottom of text page 9 serve as a good introduction to the study of Part 1, “Life in England: Before the Industrial Revolution.” Through these questions, the students’ awareness and understanding of the costs and benefits of industrialization should deepen as the Unit progresses.

Learning Objectives

- To recognize the basic questions of the Unit.
- To be aware of England’s role in the Industrial Revolution.
- To gain an understanding of different types of historical evidence.

Key Words and Ideas

The following key words and ideas are introduced here; they are treated in greater detail in subsequent lessons.

England Great Britain Industrial Revolution

Activities and Projects

Class map activity. Students should study the map of the “Spread of Industrialization” on text pages 6–7 and try to find a pattern for the dates. The following questions may help them in their study: After England, which countries were among the first to industrialize? Which have just begun the industrialization process? In what areas of the world are these countries located? Why do you think these countries experienced industrialization later than the European or North American countries?

Individual research. Each student can choose one developing country in Asia, Africa, or Latin America and investigate that country’s industries, trade, agriculture, and social patterns. The student should find out how far along the country is in the industrialization process. As the Unit progresses, students can keep track of the country’s story and compare it to the progress of England’s industrialization.

Evaluating Student Progress

(Correct answers to the multiple-choice questions are starred*.)

1. According to the map on text pages 6–7, which country was the second to begin the industrialization process?
 - A. Germany
 - B. United States
 - *C. France
 - D. Mexico
2. Which countries began to industrialize in the 1970's?
 - *A. Nigeria and Indonesia
 - B. South Korea and Pakistan
 - C. Iraq and Egypt
 - D. Japan and Australia
3. In what century did most of the countries of Europe start to industrialize?
 - A. 1700's
 - *B. 1800's
 - C. 1900's
 - D. 1600's
4. Study the map of England on text page 8. Describe the main features of England's geography that you can recognize. What effect would England's geography have on its trade with other nations and its industrial development?

part 1

LIFE IN ENGLAND: Before the Industrial Revolution

Theme and Overview

This part of the book examines life in England during the late 1700's. The setting is the imaginary agricultural village of Farmington. Through a close look at three families—the Moores, the Whitefields, and the Thompsons—students will gain an understanding of pre-industrial England and how farming and technological developments changed the lives of ordinary people. Activities which ask students to compare and contrast modern life with that of pre-industrial England reinforce awareness of the effects of these changes.

Part 1 also examines land enclosure, a method of land division and ownership spurred by Parliamentary legislation, which increased dramatically during the late 1700's. Enclosure and new agricultural techniques were to change forever the lives of villagers throughout England.

Lesson 1 TWO FAMILIES: THE MOORES AND THE WHITEFIELDS (text pages 10–13)

Overview of the Lesson

This lesson presents the typical way of life of laborers in the countryside of England in the 1700's. It introduces the students to a pre-industrial society based on agriculture and the land through the lives of two imaginary country families—the Moores and the Whitefields. Their standard of living and way of life were representative of more than half of the households in England during the 1700's. The lesson describes their homes, possessions, and seasonal occupations. It also explains the division of tasks within the family.

Learning Objectives

- To be aware of the conditions of a pre-industrial society as it existed in rural England during the 1700's.
- To learn the meaning and importance of agriculture and the use of the land in pre-industrial England.
- To understand the economic relationships among people in pre-industrial England.
- To see how cottage industry functioned.

Key Words and Ideas

agriculture	cottager
common land	gleaning
cottage industry	market town

Historical Background

In a pre-industrial society, most work was done by human or animal power. Among other tasks, this included the carding, spinning, and weaving of wool, the making of butter and cheese, and the planting, plowing, and harvesting of crops.

In describing pre-industrial life in rural England, it is useful to know something of its social structure. The Moores and the Whitefields were typical *cottagers*. Cottagers made up the largest group in rural England and the lowest on the social scale. They rented and lived in cottages and worked for wages. Higher up on the social scale were the *farmers*, who rented land and grew crops for their own needs and sometimes produced a surplus they could sell in the market town. Then came the *landowners*. Self-sufficient landowners who had just enough land to support themselves were called *yeomen*. Above the yeomen on the social scale were the owners of large landholdings and the *gentry*. George Thompson, who employed Tom Moore and John Whitefield, was wealthy enough to be considered above the yeoman level. These people had more land than they could farm themselves. They would hire laborers to cultivate their land or rent it to others to farm. A member of the gentry, such as the country squire, usually possessed inherited wealth and held an important position in the social life of the village.

Activities and Projects

Independent writing assignment and class discussion. Each student can form his or her own idea of a typical modern American family. In a short essay, students should indicate how many members there are in their typical family. Some of the questions that might be answered include: How much living space does the family have? What are the roles in the household of the women, men, and children in the family? How much work is done outside the home? What goods and services does the family buy and what does it make for itself? How far must family members travel to work, to school, and to shopping areas?

In their essays, students may also want to describe the relationships among family members and their dependence on others for a living. You may want to ask individual students to read their papers to the class. It would be interesting to see if any patterns emerge and if the class can establish a composite picture

of a modern American family. What comparisons can the students draw between a typical modern family in industrialized America, and the Moores and Whitefields in England before the Industrial Revolution?

Small-group research. Divide students into small groups to investigate modern methods of manufacture of various textiles—wool, cotton, synthetics, or others. Each group should prepare a report with special emphasis on the efficiency of the modern system of production versus the cottage system. The students should also discuss the advantages and disadvantages of each system to the worker and to the consumer.

Individual research. Some students may be interested in investigating and reporting on the existence of modern cottage industries in India, Asia, Africa, or in the Appalachian region of the United States. Each student could choose one industry and report on such factors as the product and location of the industry and the everyday life of the artisans. Of special interest would be a summary of the advantages and disadvantages of competing with factory-made goods.

Using the Textbook Questions

Margin questions on text page 11. First question. Tom Moore needs George Thompson in order to survive. Tom earns his livelihood by working for George. If George did not have Tom working for him, he would not be able to cultivate as much land, but he would still be able to survive. Without Tom, George would still have three other laborers working his land.

Second question. Tom earns money working for George Thompson. Anne Moore gardens, cooks, gathers wood, makes the family's clothes, gleanes, takes care of the children, the cow, and the house, and makes the butter and cheese which she sells in the market. The oldest child helps in the house and garden and cares for the younger children.

Third question. The cow provides the Moore family with its only source of butter, milk, and cheese. The surplus butter and cheese is sold to get additional income.

Margin questions on text page 13. First question. Like the Moores, the Whitefields depend on the land for their livelihood. John farms ten acres to raise wheat and barley for his family. Mary gleanes, tends the chickens, cooks, takes care of the house, and grows vegetables. When farm work is light, the Whitefield family spins and weaves wool.

Second question. By working as a self-sufficient unit, the family can provide for all of its own needs and does not have to rely on others. The work atmosphere also lends itself to a feeling of family togetherness. However, total dependence on the land can lead to hardships when growing conditions are not favorable and the harvests are poor. Also, if one member of the family is sick or disabled, or dies, the livelihood of the whole family is placed in jeopardy.

Evaluating Student Progress

1. In the 1700's, most people in England:
 - *A. lived in the countryside.
 - B. worked in such trades as carpentry and shoemaking.
 - C. lived in the cities.
 - D. spun and wove wool.
2. Cottage women in the English countryside at this time:
 - A. sat at home and did nothing.
 - B. held jobs outside the home.
 - *C. took care of the house and family and contributed to the family income by selling goods at the market.
 - D. earned extra money by weaving.
3. In the countryside of England during the 1700's most children between the ages of six and eleven:
 - A. went to school.
 - B. played all day.
 - C. got a job outside the home.
 - *D. helped their parents at household and family tasks.
4. In pre-industrial English homes it was a sign of some wealth to have:
 - A. a floor of planks on the ground and a loft for sleeping.
 - *B. a brick floor and a loft.
 - C. a brick floor and no loft.
 - D. no floor except earth and a loft.
5. Assume that one of the following rights was denied to the Moores and Whitefields: the right to glean, to use the common pasture, to have a one-acre vegetable garden. How would this affect their way of life? (*Answer:* These were all important because they supplemented family income and food supplies. Without the right to glean in harvested fields, the family would not have enough grain for bread. If they were denied the one-acre garden, they might not have enough vegetables to supplement the grain in their diets. Finally, without the use of the common pasture, the cottagers would not be able to graze their cow since they had no grazing land of their own.)

Lesson 2: HOW THE MOORES AND WHITEFIELDS SPEND THEIR EARNINGS (text pages 14–15)

Overview of the Lesson

This lesson tells how the Moores and Whitefields spent their money. It demonstrates how each family, with all members contributing, earned or produced only enough to take care of the basic needs of food, clothing, and shelter. Little money was left over for luxuries or emergencies. The activity at the end of the

lesson helps the students to draw comparisons between the Moores' and Whitefields' economic situation in pre-industrial England and the economic considerations of today's families.

Learning Objectives

- To grasp the economic situation of cottager families in England before the Industrial Revolution.
- To understand how much farm laborers earned and the cost of some basic household items.
- To compare the economic conditions of families in England before the Industrial Revolution with the economic conditions of families in today's society.

Key Words and Ideas

pence pounds shillings

Historical Background

In a pure subsistence-level economy, a household produces everything for itself. In a market economy, individuals buy and sell their labor, services, and goods. It is generally true that a pre-industrial society has a subsistence economy, and an industrial society has a market economy. The economy described in our study of England in the 1700's is a mixture of the two. Most items were produced at home, although some were bought with money made from the Moores' and Whitefields' sale of their labor.

Activities and Projects

Class project. The class can calculate what percentage of their earnings the Moores and Whitefields spend on food and shelter. (The Moores spend 64% of their earnings on food and 11% on shelter. The Whitefields spend 33% on food and 18% on shelter. Items such as candles are not included in these percentages.) Similar figures for an American family in the early 1970's show that Americans spend about 20% of their income on food and 31% on shelter. What conclusions can the students draw from these statistics?

Class discussion. If students were to create their own budgets, or a budget for their typical American family, how much would be spent on items that are not included in the Moores' and Whitefields' budgets? A list of these items could include entertainment, travel, books, and tuition expenses. Students can look back to the pictures on text pages 2 and 3 and discuss how many of the items pictured would appear in a budget and how many do not depend on having extra money to spend.

Using the Textbook Questions

Modern Parallel: activity on text page 15. In the discussion, students should be aware of the fact that the Moores and Whitefields were more self-sufficient than people are today. Also, all family members who were able to, including children, contributed directly to the earnings of the family.

Evaluating Student Progress

1. Which is the correct statement?
 - A. The Moores are better off than the Whitefields because they earn a larger salary.
 - B. The Moores are better off than the Whitefields because they spend less for rent.
 - C. The Whitefields are better off because they spend more for butter, milk, and cheese.
 - *D. The Whitefields are better off because they have a larger house and eat a more varied diet.
2. Farm laborers, such as Tom Moore, earn more in summer than in winter because:
 - A. employers are more generous in summer.
 - *B. laborers have more work to do in summer.
 - C. it is hotter in summer.
 - D. the fields are flooded in winter.
3. The Moores and Whitefields save on fuel costs because:
 - *A. Anne Moore and Mary Whitefield gather firewood from the village forest.
 - B. the children pick up stray pieces of coal.
 - C. they don't heat their homes in the winter.
 - D. each family buys firewood in large quantities in order to save money.
4. What items do both families buy? Why? (*Answer: Both families must buy sugar, tea, salt, meat, thread, soap, candles, shoes, and hats, because they cannot produce any of these items for themselves. Tea and sugar are imported and have to be bought by everyone. Since the Moores or Whitefields do not possess a great deal of livestock, they cannot slaughter their own meat. Instead, they have to buy their meat.*)
5. What do the Moores and Whitefields produce for themselves? (*Answer: The two families grow their own vegetables and make most of their own clothes. The Moores' cow supplies the family with dairy products, and the Whitefields' chickens supply them with eggs. Both families glean wheat, but the Moores still have to buy additional wheat to supplement their gleanings.*)

Lesson 3: THE CHANGING COUNTRYSIDE

(text pages 16–17)

Overview of the Lesson

In this lesson, George Thompson, Tom Moore, and John Whitefield discuss the concept of enclosure, the process by which the common land of an English village was divided among the village's landowners. Before enclosure, land holdings were scattered throughout villages in separate strips. With enclosure, property boundaries were redrawn so that the land was awarded in whole parcels. Landowners then fenced in, or "enclosed," their land. Large landowners stood to gain the most from enclosure since the common land was distributed in proportion to the amount of land owned before enclosure.

The prospect of enclosure in Farmington affected the large landowners and the cottagers who worked for them in opposite ways. In the discussion, George Thompson, speaking for the large landowners, outlines the reasons why he favors enclosure. The most important is his belief that more grain could be produced when the scattered strips of farmland are consolidated into one large holding. Thompson is encouraged to grow more grain because he wants to make more money from the current high grain prices. And he is further encouraged because England's vast canal system now makes it easy for him to get his grain to markets.

Cottagers, such as Tom Moore and John Whitefield, dislike enclosure because their animals can no longer use the common lands for grazing. The cottagers would also lose other rights, such as the right to gather firewood from the common forests and the right to rent small farming plots from the village.

Learning Objectives

- To understand the concept of enclosure.
- To recognize the reasons why large landowners favored enclosure and why cottagers opposed it.

Key Words and Ideas

canal enclosure

Historical Background

It is important to note the changes that enclosure brought to the English countryside and the effects it had on large landowners and cottagers. In most villages in the English countryside, people who had been inhabitants for a certain period of time possessed rights to the common land. When enclosure occurred, the cottagers often received a small plot of land as compensation for the

loss of their rights to the commons. However, the large landowners gained the most because the basic principle of the division of the common land was as follows: the more land each farmer owned, the more land each farmer was awarded from the common land.

Activities and Projects

Research project. Many historians believe that children in the 1700's generally followed the same occupation as their parents. Some students may want to investigate occupational trends to see if this is true today. Interested students might plan an informal telephone or street-corner survey to determine what the existing statistics are and in what field this pattern seems to occur. They can then report their findings to the class.

Opinion poll. Whenever an economic change is proposed, some people favor it, while others oppose it. Have the students choose one proposed change in their town, city, or state, such as the relocation of a large factory or the building of a new shopping center. They can read up on the developments in their local newspaper and study the effects that this change would have on the community. Students can then go to a local shopping center or mall and poll a small but representative sampling of people. The students should ask questions that cover the effects of the proposed change on local taxes, employment opportunities, and ecology. Then they can report the results of their poll to the class. Did most of the people polled approve or oppose the proposed change? What reasons did they give for their support or opposition? Students should write up the results of their poll and comment on the reasons that people gave for their support or opposition to the proposed change. Can any generalizations be formed from the poll?

Small-group discussion. Divide the class into groups of three or four students. Have each group formulate an answer to the third question in the Analyzing the Evidence activity on text page 17, concerning an alternate plan to enclosure. Each group should then present its plan to the class. Let the other students discuss the plans, and then the class can take a vote as to which group has the best plan. After Lesson 6, when the students learn about the effects of enclosure on the Moores and Whitefields, they can then re-evaluate their plans.

Using the Textbook Questions

Analyzing the Evidence: activity on text page 17. Question 1. George Thompson wants more land and increased wheat production and does not think that the Moores and Whitefields will suffer from enclosure. Tom Moore does not want to lose grazing rights to the common land or the rights to glean and to gather firewood. John Whitefield does not want to lose the right to rent village land or his gleaning and fuel-gathering rights. All three individuals are concerned about their own interests.

Question 2. George Thompson will receive more land. The Moores will lose

grazing, gleaning, and fuel-gathering rights. The Whitefields will lose gleaning and fuel-gathering rights, and they will not be able to rent farmland from the village. The physical aspect of Farmington will change drastically as the common lands are enclosed. The village might also have to deal with the economic and social problems of the cottager families.

Question 3. This is a matter of student opinion and answers will vary. It provides an excellent opportunity for a class or small-group discussion.

Evaluating Student Progress

1. Enclosure was accomplished by:
 - A. fencing in animals in one pasture.
 - B. putting a fence around everyone's garden.
 - *C. combining the land of each landowner into one block and then fencing it in.
 - D. putting a fence around everyone's house.
2. The elimination of the common lands meant that:
 - *A. the laborers' animals could no longer graze there.
 - B. no one could farm that land.
 - C. no one could take a walk on it.
 - D. it could be plowed only every other year.
3. Large landowners favored enclosure because:
 - A. they could produce more grain, and grain prices were low.
 - *B. they could produce more grain, and grain prices were high.
 - C. the cottagers would have to sell their cows.
 - D. they did not have to produce as much as before.
4. "Any change in society affects the people involved in that society." How does this statement apply to the story of enclosure in Farmington? (*Answer:* The effects of enclosure would be felt by everyone in the village. The large landowners, represented by George Thompson, would stand to benefit the most. Cottagers, such as Tom Moore and John Whitefield, were concerned about enclosure's effects on their ability to provide for their families.)
5. Why did large landowners favor enclosure? (*Answer:* They would receive more land from the enclosure award because they already owned large amounts of land. After enclosure, their land was easier to farm because it was in one large plot of land, not in several strips scattered throughout the village. The large landowners no longer had to follow village customs and traditional farming practices. They were free to develop their land and to use new methods to increase their crop yield.)

Lesson 4: THE ENCLOSURE OF FARMINGTON
(text pages 18–21)

Overview of the Lesson

This lesson describes the political system in England during the 1700’s and its role in the process of enclosure. It explains the complicated method of choosing representatives to the House of Commons—a method which resulted in the House being controlled by the large landowners. The lesson also explains the legal process necessary to enclose village land. An actual case of enclosure—the town of Stanwell in the county of Surrey in 1789—is presented. The lesson ends with a description of the enclosure of the village of Farmington. The maps of Farmington (text pages 20–21) illustrate the division of land within the village before and after enclosure.

Learning Objectives

- To understand the nature of Parliament:
 - a) the powers of Parliament and its relationship to the king.
 - b) the distribution of seats in Parliament and the qualifications for voting for representatives to Parliament.
 - c) the social composition of each House.
- To understand the political and legal procedure for enclosure.
- To understand how enclosure affected land distribution in Farmington.

Key Words and Ideas

bill	county	petition
borough	Parliament	representation

Historical Background

In the 1600’s, Parliament and the king fought a series of bitter disputes which culminated in the “Glorious Revolution” of 1688. In that year, Parliament established its supremacy over the Crown and became the ultimate law-making institution in England. By the 1700’s, the king could influence Parliament, but in no way could he override decisions made by Parliament. Only people possessing large amounts of land and wealth were able to hold seats in Parliament. They were the real rulers of the country.

Although Parliament usually granted enclosure when all the large landowners in a particular village requested it, there were some safeguards against the domination of the enclosure process by an individual large landowner. It was necessary to obtain the approval of the owners of three-quarters of the land in the village before Parliament granted permission.

Activities and Projects

Class discussion. The English political system of the 1700's was firmly based on the importance of property. Power was held by those who were able to afford property, and voting rights in the counties were restricted to those men who owned land worth at least 40 shillings in rent per year. Hold a discussion comparing the English political system of the 1700's with our own. Who can vote in the United States today? Who holds political power? How would the students compare our political system with the British system of the 1700's? Is our system "fairer" than the British?

Small-group map project. Divide the class into groups to consider the maps of Farmington before and after enclosure on text pages 20–21. Students should take a careful look at each of the maps and describe in detail what they can learn about land use and ownership before and after enclosure. Each group should state their conclusions to the class as a whole. You can help direct the students' attention to the differences in the division of land before and after enclosure, the distances the Moores, Thompsons, and Whitefields traveled to their fields, and the changing physical features of the village.

Using the Textbook Questions

Margin questions on text page 19. First question. Stanwell's enclosure did follow Parliament's rule that the owners of three-quarters of village land had to approve enclosure before it was granted. The total value of land in Stanwell was £3,390. Although owners of land worth a total of £461 either objected to enclosure or abstained, the owners of land worth a total of £2,929 a year approved of enclosure and signed the bill. This amounted to well over three-quarters of the land in the village.

Second question. There are no right or wrong answers. They are matters of student opinion and answers will vary. However, it could be mentioned that the enclosure procedure clearly favored large landowners, even though it was necessary to obtain the votes of the smaller landowners.

Evaluating Student Progress

1. Parliament granted enclosure if:
 - A. three-fourths of the landowners approved.
 - B. three-fourths of the villagers approved.
 - *C. the owners of three-fourths of the land approved.
 - D. the King approved and no one else.
2. Who could vote in the 1700's?
 - A. A wealthy woman.
 - *B. A man owning land worth 40 shillings in rent per year in a county.
 - C. Anyone in a borough.
 - D. Anyone owning two acres of land in a borough.

3. Which statement is true?
- A. The counties voted for the House of Lords, and the boroughs voted for the House of Commons.
 - B. The King chose all members of Parliament.
 - *C. The King appointed new members of the House of Lords, and the counties and boroughs voted for the House of Commons.
 - D. The King appointed the House of Commons, and the counties and boroughs voted for the House of Lords.
4. If we define “democratic” as one person equaling one vote, to what extent was the British political system democratic in the 1700’s? (*Answer:* Parliament was the only lawmaking institution in England. The seats in the House of Lords were held by nobles who were not elected. The members of the House of Commons were elected, but by approximately only one out of thirteen adult males. By the modern definition of democracy, the system was undemocratic. However, it should be noted that in the 1700’s very few countries other than England had elected legislatures.)
5. To what extent did enclosure in Farmington follow the usual procedures? (*Answer:* The owners of more than three-fourths of the land in Farmington approved enclosure. Thompson received an additional 100 acres because he owned 200 acres before enclosure. This followed the rule that the more land a person owned, the more he or she received. The Moores and Whitefields received two acres for their common rights, which was a frequent practice.)

Lesson 5: RESULTS FOR THE THOMPSONS

(text pages 22–23)

Overview of the Lesson

Enclosure produced mostly favorable results for England’s large landowners. This lesson describes both the immediate and long-range effects on George Thompson. He acquired 100 acres of the common land, consolidated his scattered strips of land into one large plot of farmland, and improved the soil by planting clover instead of letting the land lie fallow. (The chart on the bottom of text page 22 illustrates the old and new methods of crop rotation.) The lesson then describes the changes in George Thompson’s lifestyle after he was able to triple his earnings. He bought luxuries, hired servants, and educated his children in fashionable schools. Thompson’s new wealth and the resulting change in his lifestyle were typical of many large landowners of the time. The activity at the end of the lesson encourages the students to think about how enclosure affected the Thompsons’ values.

Learning Objectives

- To compare the old and new systems of crop rotation.

- To understand how enclosure and the change in crop rotation methods increased grain production.
- To see how large landowners benefited from these changes and how they reacted to their new wealth.

Key Words and Ideas

crop rotation fallow

Historical Background

Enclosure occurred in many English villages during the late 1700's and early 1800's and coincided with the Napoleonic Wars. In order to supply its troops and encourage the war effort, the English government spent more money than it collected in taxes. This deficit caused inflation. In turn, this general inflation during the war years raised grain prices. The large landowners were encouraged to produce more grain because they saw that they could make healthy profits. Enclosure had freed them from the old customs of land cultivation. Now they experimented with new farming methods in order to increase their grain production.

It is also important to note the upward mobility of the landowners. Once they made enough money, they tried to live as the gentry did. They acquired such luxuries as fine furniture, new clothes, and expensive education for their children. Thus the landowners began to set themselves apart from those in lower economic groups.

Activities and Projects

Class discussion. The Thompsons' new prosperity gave them a certain amount of freedom. Mrs. Thompson and the children no longer had to work at farm chores and could pursue education, the arts, and charitable and social functions. George Thompson also worked at improving his social standing in the village and stopped working in the fields with his laborers as he had done before enclosure. If your students had enough money for several labor-saving devices, travel, education, entertainment, or new housing, which would they consider the most important? List these in order of class preference.

Individual research. Some students may want to investigate the improved methods of land cultivation in England at the time of the enclosure movement of the late 1700's. They should mention the contributions of such innovators as Jethro Tull. The King of England during this period was George III – the same king who ruled during the American Revolution. In England, he was nicknamed "Farmer George." Students may want to find out why he was given this nickname.

Using the Textbook Questions

Thinking It Through: activity on text page 23. **Question 1.** The answer to this question is a matter of student opinion and answers will vary.

Question 2. With enclosure, George Thompson could farm his land more efficiently since it was in one large 300-acre plot, instead of in strips scattered throughout the village. Also, the new system of crop rotation doubled the amount of wheat he could produce from each acre of land. These results—plus high wheat prices—enabled Thompson to increase his wealth and change his lifestyle.

Question 3. After enclosure, the Thompsons used their new wealth to buy luxuries they had not been able to afford. They seemed intent on improving their position in the community and copying the lifestyle of the gentry. They were concerned with their own status and not with the welfare of those who were poorer than they, such as the Moores and the Whitefields. George Thompson enlarged his house, bought fine furniture and clothes for his family, and educated his children. Mrs. Thompson stopped doing the household chores and instead joined fashionable clubs. The Thompsons no longer felt it necessary to share their midday meals with their servants and workers.

Evaluating Student Progress

1. The advantage of planting clover was that:
 - A. it made the fields look greener.
 - *B. animals could graze on it, and their manure fertilized the soil.
 - C. it improved soil drainage.
 - D. its roots nourished the soil.
2. George Thompson was able to double wheat production because:
 - A. the war produced high wheat prices.
 - B. the canal made it easier to ship grain to London.
 - C. he drained the swamp.
 - *D. enclosure increased his holdings and the new method of crop rotation increased grain production.
3. The price of grain went up during the war because:
 - A. it cost more to produce.
 - B. it cost a great deal to ship the grain to London by canal.
 - *C. the government bought up large quantities of wheat to feed the troops. This demand for wheat increased its price.
 - D. George Thompson and the other large landowners were greedy and charged more for the wheat.
4. “George Thompson knew how to take advantage of enclosure and the new farming methods developed at this time.” Is this statement true or false? Use evidence from the text to support your answer. (*Answer:* This statement is true. Thompson drained the swampland that he received in his

enclosure award in order to gain more arable land. He ended the practice of leaving one-third of his land fallow every growing season, and instead adopted the new crop rotation method. And since wheat was in demand because of England's war with France, Thompson was able to sell his wheat for a high price. Thompson knew how to take advantage of enclosure and reaped all its benefits.)

Lesson 6: HOW ENCLOSURE AFFECTED THE MOORES AND THE WHITEFIELDS (text pages 24–27)

Overview of the Lesson

This lesson shows how enclosure reduced the independence of the Moores and Whitefields. With the division of the common lands and the loss of grazing, gleaning, farming, and fuel-gathering rights, both cottager families suffered a severe loss of independence and financial security. The Whitefields were able to fall back on their earnings from weaving, but the Moores were totally dependent on large landowners for work, wages, and survival. With the 60% increase in grain prices over the next twenty years, the living standards of both families dropped to an even lower level, demonstrated by the family budgets immediately after enclosure and twenty years later. The Whitefields could barely survive on their own, while the Moores were forced to go on welfare. It is important to note that both enclosure *and* the rise in grain prices contributed to the decline of the cottagers' standard of living. Neither circumstance alone was entirely responsible.

Learning Objectives

- To understand how enclosure and high grain prices caused suffering among the cottagers.
- To observe how the cottagers tried to cope with these problems.

Key Words and Ideas

parish welfare

Historical Background

As the story of the Moores and Whitefields demonstrates, farm laborers did not drift to the cities when enclosure occurred, although they suffered greatly. Most of them stayed in the countryside where there was still work for them to do. In fact, research shows that the farming population increased slightly between 1750 and 1815—the peak years of England's enclosure movement.

Activities and Projects

Class discussion. Conduct a round-table discussion to give students an opportunity to compare their circumstances with those of cottager families of 1791. Write the following questions on the blackboard in order to focus the discussion:

- What would happen to the price of bread if the price of grain rose by 60%?
- What would happen if all food prices rose by 60%?
- How would this affect your family budget?
- What differences, if any, do you see between a family's situation today and the situation for the Moores and Whitefields?

Small-group activity. Have the students re-examine the alternative plans to enclosure that they devised in their small groups (Small-group activity for Lesson 3). Having read the results of enclosure in Farmington, each group should comment on its own plan. Then have the class as a whole comment on each plan. The class can then take a vote as to which plan might have been the best alternative to enclosure. Would the “winning” plan have changed the results? How?

Using the Textbook Questions

Thinking It Through: activity on text page 27. Question 1. The Moores were forced to sell the two-acre plot that was granted to them after enclosure because it was too small to grow wheat, they had no animals to plow the land, and their cow did not provide enough manure to fertilize the land properly. Also, they could not afford the required cost of fencing in their land. They returned to renting their cottage and one-acre garden. Without the common land, they could no longer graze their cow and they were forced to sell it. High wheat prices over the next twenty years made them even more dependent on George Thompson for employment. Finally, they lost their independence completely and had to be supported by the parish.

The Whitefields were also forced to sell their two acres and they returned to renting their cottage and one-acre garden. Without the common land, John Whitefield could not raise grain for his family by renting the ten acres of land from the village. Over the next twenty years, their living standard dropped. They were less able to provide for themselves, but they did not have to turn to the parish for support.

Question 2. If someone had stopped the clock before Parliament made its decision, the Whitefields would have maintained their living standard and independence. They would have continued producing their own grain and would not have been affected by its price rise. (Possibly, the rent on the ten acres they used might have gone up.)

The Moores would have been hurt by rising grain prices, because they had to buy 80% of their wheat. By cutting out all meat and eliminating expenses for

new clothes and emergencies, they might have been able to support themselves. In any case, they were better off before enclosure. However, it is important to note that if enclosure had *not* occurred, grain production would not have risen. And the inevitable grain shortage during the Napoleonic Wars would have driven prices even higher than they were with enclosure. This would have further increased the hardships of the Moores and Whitefields.

Question 3. Students should consult their notes for the answer to this question.

Question 4. The answers to this question will vary.

Evaluating Student Progress

1. Cottagers such as the Moores had to sell their small plots of land because:
 - *A. it cost too much to fence them in.
 - B. there was no common land for grazing.
 - C. there was not enough grass for the cow to graze on.
 - D. the soil was not good for farming.
2. Laborers had to sell their cows after enclosure because:
 - A. they were tired of eating and drinking dairy products.
 - *B. there were no more common lands for grazing.
 - C. beef prices were high.
 - D. they could make more money grazing sheep.
3. What effect did the 60% increase in grain prices have on the cottagers?
 - *A. They could no longer afford to buy meat.
 - B. They grew their own grain in order to save money.
 - C. They had to work 60% longer in order to make up the difference.
 - D. They were forced to stop heating their houses in winter.
4. On whom did the Moores depend for their livelihood immediately after enclosure? twenty years later? (*Answer:* Immediately after enclosure, the Moores were dependent on George Thompson. Their independence was curtailed because of the loss of their rights to the common land. The wages from George Thompson were their only source of income. Twenty years later, the Moores' income could not keep up with rising costs, and they were forced to depend on welfare from the parish.)
5. Who did the Whitefields depend on for their livelihood immediately after enclosure? twenty years later? What effect did John Whitefield's weaving have on the family's livelihood? (*Answer:* Since the Whitefields lost their rights to the common land, they were increasingly dependent on their wages from George Thompson immediately after enclosure and twenty years later. However, they were able to supplement this income with the earnings from John Whitefield's weaving. This extra skill *may* have been the crucial difference between being able to support themselves and relying on parish welfare, as the Moores were forced to do.)

Lesson 7: RESULTS: THE BIGGER PICTURE

(text pages 28–29)

Overview of the Lesson

This lesson reviews some of the main results of enclosure in England. One result was that between 1760 and 1815 farms were consolidated. Large landowners also increased their holdings by combining their property with shares of the common land acquired by enclosure. Frequently, the large landowners bought out the land of the small farmers and cottagers, who were forced to sell because of the expense of enclosing their land. Welfare costs rose during the peak enclosure years because of the need to support the families of farm laborers who had lost their livelihoods. In the 100 years after 1750, grain production more than doubled as a result of better methods of land cultivation and the greater efficiency of farming large enclosed fields instead of scattered strips.

Learning Objectives

- To review some of the effects of enclosure on England.

Key Words and Ideas

crop rotation gentry import

Historical Background

Enclosure was a nationwide movement. One factor that spurred enclosure was England's rising population, which increased from 6 million in 1750 to 18 million in 1850. The increased demand for more food to feed this growing population drove up the price of grain. It became practical and profitable for England's landowners to grow more food crops. Enclosure plus more efficient agricultural techniques increased production to the extent that by 1850, England was supplying almost all of its food needs.

Activities and Projects

Individual research. In the 1700's, the new farming technology had widespread effects throughout England. To introduce students to the study of the effects of new technology, assign a research paper in which each student can choose a technological change, such as the replacement of manual labor by machines or the new methods of communication by satellite. In their papers, students should trace the effects this change has had on various aspects of our national life, such as the economy, the cities, employment, buying habits, and

lifestyles. What benefits have resulted from improved technology? What harm has it done? to whom? Prepare a bulletin board of the technological improvements that the students have discussed in their papers.

Class discussion. Both the Moores and the Whitefields lost independence and security when enclosure changed their way of life. In order to stimulate students' thinking about the relationship between jobs, security, and society's responsibilities, you can initiate a discussion by asking the following questions of the class: How can people protect themselves against some sudden economic change for the worse? What do you think society owes its citizens when their most productive working years are finished? What can people do at the start of their working careers to insure their independence later on?

Using the Textbook Questions

Margin question on text page 28. Large landowners received more land from enclosure. They acquired land from the division of the commons, and they were able to buy out small landowners and cottagers (like the Moores and Whitefields) who could not pay for the cost of fencing.

Margin questions on text page 29. First question. After enclosure, farm laborers lost the rights to graze their animals, to glean, and to gather fuel. Without these important rights, they produced less for themselves.

Second question. Grain production rose because of several factors. With enclosure, a landowner's scattered strips of land were consolidated into one large farm. Landowners no longer followed the customs of the village which in the past had prevented experimentation with more advanced farming methods. For instance, they used more efficient crop rotation methods by growing clover instead of allowing one-third of the land to lie fallow every growing season. Finally, there was more land available for farming because landowners drained swamps in order to gain more land for growing crops, and they used the divided common lands for farming instead of grazing animals.

Evaluating Student Progress

1. The cost of welfare in England rose during 1776–1818 because:
 - A. the country was better off.
 - B. many cottagers had to rely on large landowners for their livelihoods.
 - C. the large landowners got more land.
 - *D. enclosure and higher food prices made it difficult for cottagers to survive.
2. Grain production increased from 1750–1850 because of:
 - A. the war with France.
 - B. an increase in welfare costs.
 - C. new regions in England that were opened to cultivation.
 - *D. enclosure and the use of more efficient farming methods.

3. Large landowners increased their holdings because:
 - *A. enclosure gave them a portion of the common land.
 - B. grain production rose.
 - C. canals made it easier to ship grain.
 - D. cottagers were given part of the common land.
4. What was the relationship between enclosure and the cost of welfare? (*Answer: As more and more villages were enclosed, welfare costs went up because of the increased number of cottagers, and small farmers who had lost their incomes were forced to rely on the parish to support their families. After the enclosure movement peaked in 1818, welfare costs declined.*)
5. Do you agree or disagree with the following statement? "Enclosure was a great benefit for English society as a whole." Support your answer with evidence from the text.

Lesson 8: SHOULD THESE CHANGES HAVE BEEN MADE? (text pages 30–33)

Overview of the Lesson

This lesson illustrates some of the different ways in which people living in England in the late 1700's viewed enclosure. Some favored enclosure because it fostered more efficient use of farmland. These supporters also believed that it gave work to the poor since the large landowners needed to hire more people to work their farms. Other observers felt that it ruined the lives of the cottagers because it deprived them of their rights to the common land and forced many of them to rely on welfare for their support. In a few villages, both landowners and cottagers resisted enclosure, either by legal or violent methods. But most people accepted enclosure when it came.

Learning Objectives

- To examine varying views concerning enclosure.
- To evaluate the benefits and costs of enclosure.

Historical Background

At this time in English history, the upper class viewed the poor as lazy, irresponsible children who had to be forced to do hard work. Those who favored enclosure believed that the poor could raise their living standard with some form of steady labor on the newly enclosed farms.

Activities and Projects

Class debate. Divide the class into three groups representing a Parliamentary

Committee, a group favoring enclosure, and a group against enclosure. The groups favoring and opposing enclosure should prepare arguments and then present them to the Committee. Students may draw information for their arguments from this Part of the Unit and from Part 1 of the Research Bank. The Committee members may ask questions of the debaters and then vote whether or not to permit enclosure. If they decide to permit enclosure, how should the land be divided?

Independent writing assignment. Students might summarize Part 1 in a short essay. They should refer to the organizing questions of this Part, on text page 9, and write their answers to each question. Answers should be carefully documented with the evidence from history. Students can then read and compare their answers in class.

Using the Textbook Questions

Margin questions on text page 30. These writers cared about increasing crop production and employing the poor in the enclosed fields. Eliminating the commons would mean an end to wasteful land use and would rid the poor of an excuse not to work.

Margin questions at top of text page 31. The anti-enclosure writers were concerned with the harsh conditions of the poor and the rise in welfare payments. They were not interested in increased grain production. They believed instead that enclosure hurt the cottagers.

Margin question at bottom of text page 31. Arthur Young believed that enclosure destroyed a cottager's incentive and sense of independence.

Margin questions on text page 33. The people at Otmoor destroyed only the fences and did not attack any individuals. Popular support was evident since the special police refused to be sworn in and the townspeople appointed a special herder to look after the cows grazing on the reclaimed common land. The second question is a matter of student opinion and answers will vary.

Evaluating Student Progress

1. The major economic argument for enclosure was that:
 - *A. it used the land more efficiently.
 - B. cottagers could still keep their cows.
 - C. it would keep the cottagers off welfare.
 - D. it gave lazy people work to do.
2. The major economic argument against enclosure was that:
 - A. Parliament had not given the cottagers the right to vote.
 - *B. the cottagers lost their independence and had to be supported by the parish.
 - C. the cottagers did not want to work.
 - D. the large landowners became wealthier.

3. Which of the following most accurately describes the reactions of the majority of cottagers to enclosure?
- A. They cut down fences surrounding their one-acre gardens.
 - B. They built fences around their houses.
 - *C. They accepted enclosure peacefully.
 - D. They demonstrated against enclosure.
4. Refer to the Oliver Goldsmith poem, "The Deserted Village," on text page 32. To what group of people do the last two lines in the second stanza refer? Do you think that Goldsmith favored or opposed enclosure? Why? (*Answer:* The "bold peasantry" that Goldsmith mentions are the displaced cottagers who have lost their independent livelihoods because of enclosure. Goldsmith obviously opposed enclosure because of its effects on the cottagers. Students can quote passages from the poem to support their answers to the last question.)
5. According to Arthur Young's studies, how were a cottager's self-esteem and independence affected by ownership of a small patch of property? (*Answer:* Arthur Young discovered that when cottagers were allowed to keep a small patch of property after enclosure, they showed a greater determination to stay off welfare. Enclosure had destroyed the cottagers' incentive for hard work and self-respect. By maintaining a small piece of property, cottagers were able to salvage some of the independence that they had possessed before enclosure.)

part 2

FORCES OF CHANGE: The Industrial Revolution

Theme and Overview

The enclosure movement began the series of changes that turned England from a predominantly rural country dependent on farming and cottage industries into a modern industrial society. Part 2 expands the theme of change. It discusses the important technological advances of the early Industrial Revolution and their impact on England. It describes the inventions that transformed the cotton industry and the role that the steam engine and the improved iron production process played in England's industrialization.

Part 2 also focuses on the inventors and the businesspeople who were the pioneers of the Industrial Revolution. It examines the qualities that enabled people to survive and succeed in an industrial society. Throughout Part 2, students are alerted to the factors necessary for a society to become industrialized successfully.

Lesson 9: INTRODUCTION (text pages 34–37)

Overview

At the same time that enclosure and the new farming methods transformed the English countryside, important changes were taking place in the cotton industry. The application of machine technology to the cotton industry was the beginning of a process that would turn England into the first industrialized country in the world. The illustration at the top of text pages 34–35 underlines the fact that the innovations in industry were not a result of the changes in agriculture; the two were parallel events. After an explanation of the main questions and themes of Part 2, the introduction goes on to discuss the problems in the infant cotton industry in Lancashire during the 1700's. The illustration at the bottom of text pages 36–37 shows how raw cotton was made into thread.

Learning Objectives

- To consider the basic questions of this Part: What were the ingredients of successful industrialization? What did it take for an individual to make it in an industrial system?
- To be aware of the state of the English cotton industry in the 1700's.

Key Words and Ideas

carding

Lancashire

Activities and Projects

Small-group discussion. Divide the class into groups to consider and discuss the illustration on the bottom of text pages 36–37. First, students should understand the different stages of cotton thread production, what is being done in each stage, and the number of stages required to turn the raw cotton into finished cotton thread. Then have the students in each group think about the methods they could use to make the process faster and more efficient. At what stage of production would they change the process? What would they do? How would they improve each stage of the production process? Each group can present its recommendations to the class.

Individual research. Some students may want to find out more about the county of Lancashire. In a brief research paper, students can consider Lancashire's geography, climate, and transportation system during the 1700's. How important were these factors to the development of the cotton industry?

Evaluating Student Progress

1. Lancashire is located in which region of England?
 - A. Near London
 - B. The southeast
 - C. The southwest
 - *D. The northwest
2. Most of England's raw cotton imports in the 1700's came from:
 - A. China.
 - B. South America.
 - *C. the Middle East and the West Indies.
 - D. the United States.
3. In the 1700's, the total sales of England's cotton industry amounted to:
 - A. more than the value of woolen cloth production.
 - *B. only a small percentage of the value of woolen cloth production.
 - C. about the same as the value of woolen cloth production.
 - D. about half as much as the value of woolen cloth production.
4. Consider the illustration of cotton thread production on the bottom of text pages 36–37, and the illustration of woolen yarn and cloth production on text pages 12–13. What similarities can you find? (*Answer:* The organization of both the wool and cottage industries was similar, with family members engaged in various stages of the production process. Also, both the wool and cotton fibers had to be beaten in order to remove dirt, carded to separate and straighten fibers, and then spun to be made into yarn or thread.)

5. Why do you think there was such little demand for English cotton goods in the 1700's? (*Answer:* English cotton cloth was expensive since cotton had to be imported from abroad. Cotton cloth was rough, uncomfortable to wear, and difficult to sew. In addition to competing with woolen cloth, English cotton cloth had to compete with cotton goods imported from India, which were of better quality and less expensive.)

Lesson 10: PROBLEMS AND SOLUTIONS (text pages 38–41)

Overview of the Lesson

This lesson begins the investigation into the improvements in technology that changed the British textile industry. It describes two crucial inventions of the late 1700's—James Hargreaves' spinning jenny and Richard Arkwright's application of the water-frame—and examines their effects on the cotton industry. The lesson also discusses patent laws in the early years of the Industrial Revolution and the effects of these laws on the inventors and on the growing cotton industry. (For example, Hargreaves' failure to obtain a patent permitted other manufacturers to make jennies. As a result, the use of the spinning jenny spread rapidly throughout Lancashire.)

Learning Objectives

- To recognize the problems that existed in the production of cotton cloth.
- To observe the technological solutions to these problems.
- To understand the role of patents in the process of industrialization.

Key Words and Ideas

patent	warp
spinning jenny	water-frame
spinning wheel	weft

Activities and Projects

Class activity. Have the students create newspaper reports for the years 1765–1779 which highlight the technological breakthroughs of the spinning jenny and the water-frame. Reports should contain references to local and national reactions to the inventions and the inventors' patent disputes. Students can use information on text pages 38–39 and accompanying Research Bank materials.

Individual Research. In 1779, Richard Arkwright built the first cotton spin-

ning mill. By 1788, there were 119 mills in England. Have the students investigate the beginnings of cotton-spinning activity that were occurring in the United States at the same time. In a research paper, they should answer such questions as: How did the United States seek to develop its own cotton-spinning industry? What regulations did English law place on the exportation of the plans or models of its spinning machinery? Who was Samuel Slater? How did he build the first cotton mill in the United States? What was his background in the English spinning industry?

Using the Textbook Questions

Margin questions on text page 39. First question. Hargreaves sold some jennies and made a small amount of money, but could not patent his invention. He eventually started a small business and became moderately prosperous. The jenny did not make him rich, but it did make him famous. Using the jenny, the spinners could produce much more thread with less time and effort. Thus, the weavers were able to produce more cloth and make more money. The merchants also benefited from the invention of the jenny, since the increased production of cotton cloth created more business for them—and greater opportunities to make profits.

Second question. If Hargreaves had received the patent, he probably would have made much more money. With the patent, he would have had the sole right to sell jennies. Or he could have sold the right to produce them to others. The effect of a patented jenny on the weavers would have depended on Hargreaves' ability to enforce his patent. If Hargreaves had been able to control the production of his jennies, the other weavers who could not use the jenny would have been less prosperous.

Third question. The answers to this question will vary. Some factors that the students could consider are the difficulty or ease of obtaining a patent, the problems of enforcing a patent, the usefulness of patents to society, and the need to protect an inventor's rights.

Margin questions on text page 41. First question. The frame strengthened the cotton thread so that it could be used in both the warp and weft on the loom. Before the frame, linen thread was used for the warp. It was stronger but also more expensive. Use of the cheaper cotton fiber instead of the linen reduced the high price of cotton cloth.

Second question. The frame was bigger and heavier than the spinning jenny or the spinning wheel, and it needed water or horse power to run it. So it was necessary for Arkwright to construct a building large enough to house many of these frames. This building was the first cotton mill.

Third question. Two important factors controlled the location of early factories. The factories had to be near a stream or river because the swiftly running water powered the frames. And they had to be located near towns where a supply of workers was available to operate the machinery.

Evaluating Student Progress

1. Under English law of the 1700's, a patent could be denied if the inventor:
 - A. borrowed money in order to make the invention.
 - *B. had already sold copies of the invention before applying for the patent.
 - C. hired assistants to aid in the construction of the invention.
 - D. had shown the invention to others before applying for the patent.
2. The spinning jenny was an improvement over the spinning wheel because it:
 - A. made a stronger thread.
 - B. cut down on the demand for cotton.
 - *C. sped up the spinning process.
 - D. could be operated only in factories.
3. The water-frame helped the cotton industry because it:
 - A. sped up the weaving process.
 - B. put weavers out of work.
 - *C. made a stronger thread.
 - D. could be operated by hand.
4. What features made the spinning jenny so accessible to the average cotton spinner? (*Answer:* It was a simple machine that was easy to copy and to build. It was operated by hand and made of wood and other inexpensive materials that were easy to find.)
5. What special skills or technical knowledge did Hargreaves possess? (*Answer:* Hargreaves possessed strong powers of observation and inventive ingenuity. However, he didn't possess any special knowledge of science or technology. It was the simplicity of his invention that led to its wide use.)

Lesson 11: THE STORY OF RICHARD ARKWRIGHT

(text pages 42–43)

Overview of the Lesson

This lesson continues the story of Richard Arkwright and his application of the water-frame. It discusses Arkwright's character and the reasons for his financial success and describes his losing court battle to protect his patent. Although Arkwright's patent was cancelled, he was able nevertheless to amass a considerable fortune. He possessed no technical skills but instead took the ideas of Thomas Higs, another inventor, and implemented them profitably.

Learning Objective

- To understand some of the factors that contributed to an individual's success during the Industrial Revolution.

Key Words and Ideas

apprentice

Historical Background

Arkwright's failure to uphold his patent permitted the unhindered use and development of the frame. If Arkwright had been successful in limiting the use of the frame, the process of industrialization would have been considerably slowed.

Activities and Projects

Class discussion. Conduct a discussion about the qualities needed for personal success in an industrial society. Work with the class in one large discussion group, or divide the class into several small discussion groups. First, the students should pinpoint Arkwright's qualities that led to his success. Then discuss others who "made it" in the industrial system, such as John D. Rockefeller, Andrew Carnegie, Lydia Pinkham, and J. P. Morgan. (If the students are unfamiliar with these American business figures, you might want to assign some readings to acquaint the students with their life stories.) What qualities did each of these people possess? What characteristics did they have in common? How does Arkwright compare with them?

Class activity. The students can role-play the 1785 trial that tested the validity of Arkwright's patent on the water-frame. Choose students to play Arkwright, John Kay, Thomas Highs, the judge, a lawyer for each side, and the jury. After the trial, the class can decide which side had the stronger case.

Using the Textbook Questions

Margin questions on text page 43. The first, second, and fourth questions are matters of student opinion and answers will vary. The answer to the third question should include the fact that Thomas Highs possessed the ability to invent, but he had little or no business ability. Arkwright succeeded because he knew how to market an invention and make it profitable—even though the invention wasn't his.

Evaluating Student Progress

1. Arkwright's rise to prominence and wealth was due to:
 - A. the ease with which he obtained his patent.
 - B. his ability to defend his patent in court.
 - *C. his keen business sense and ingenuity.
 - D. his expert weaving skills.

2. What happened to Thomas Highs, the inventor of the water-frame?
 - A. He was able to establish a small cotton-spinning business.
 - B. He built several cotton mills throughout Lancashire and became a wealthy manufacturer.
 - C. He won the patent for the water-frame from Arkwright and then sold the machine for a large profit.
 - *D. He tried a number of times to set up a cotton mill but failed in every attempt.
3. Arkwright's failure to protect the rights of his patent had which of the following results?
 - A. The cotton industry's development came to a standstill.
 - B. The cotton manufacturers lost money.
 - *C. The cotton industry grew rapidly because of the free and unrestricted use of the water-frame.
 - D. He became richer.
4. Why did cotton manufacturers oppose the granting of patents to Hargreaves and Arkwright? (*Answer: They would have lost money if they had had to pay for use of the jenny and the frame.*)
5. Why was Arkwright able to make the frame profitable? (*Answer: Arkwright was not a weaver, but he was observant and shrewd. He learned a great deal about the cotton trade on his trips through Lancashire. He was a smart businessman who had already pulled himself up from poverty. Arkwright saw the need for the frame. He realized that he could profit from it and essentially stole it from the original builder, Thomas Highs, who was not able to capitalize on his invention.*)

Lesson 12: THE STORY OF SAMUEL CROMPTON

(text pages 44–45)

Overview of the Lesson

Samuel Crompton's invention of the mule was the next step forward for England's cotton industry and for the process of industrialization. This lesson describes how Crompton combined important features of the spinning jenny and the water-frame to create the mule. The mule could produce a thread that was both fine and strong, and it eventually made English cottons the best in the world. Crompton realized the difficulties involved in establishing a patent for the mule. He decided instead to accept the cotton manufacturers' offer of a "generous" contribution in exchange for displaying his machine to the public. However, this contribution was so small that it barely covered the cost of building the first mule.

Learning Objectives

- To understand the role of Samuel Crompton and the invention of the mule in the Industrial Revolution.
- To recognize Crompton's motives for seeking an alternative to a patent.

Key Words and Ideas

mule

Activities and Projects

Individual research. Have the students choose an inventor and try to discover the qualities of an inventor's personality and the motives that are involved in creating an invention. Some inventors your class might consider include: Thomas Edison, Alexander Graham Bell, Samuel F. B. Morse. The students can present their findings to the class. The class should compare each inventor's qualities with those of Hargreaves, Arkwright, and Crompton.

Using the Textbook Questions

Margin questions on text page 44. First question. Crompton wanted to find a technical solution to the spinning jenny's weak thread and the water-frame's rough and uneven thread. He wanted to invent a machine that produced both fine and strong thread.

Second question. Crompton's motives were similar to Hargreaves' in that he wanted to solve a technical problem in the spinning process. However, Arkwright could more easily recognize an opportunity to make money.

Margin questions on text page 45. First question. Crompton had several choices. He could have followed the course that he did or he could have tried to obtain a patent. With a patent, he would have had to fight his way through the courts with the possibility of finding someone to back him financially. He also could have asked the manufacturers for a larger sum of money before showing the mule to the public. (The second and third questions are matters of student opinion and answers will vary.)

Evaluating Student Progress

1. The mule was important to the Industrial Revolution because it:
 - A. gave weavers more work to do.
 - B. sped up the spinning process.
 - C. sped up the weaving process.
 - *D. made a fine and strong thread.

2. Crompton decided not to apply for a patent because:
 - *A. the legal fees were too expensive and he was afraid his case for a patent was weak.
 - B. he preferred to sell the mule to a cotton manufacturer for a large profit.
 - C. he wanted to keep the existence of the mule a secret.
 - D. the mule could not be easily copied and he thought a patent wasn't necessary.
3. Crompton's decision to show his machine to the public without a patent had which of the following effects?
 - A. Cotton manufacturers decided not to use the mule.
 - *B. Use of the mule spread rapidly both in home workshops and in factories.
 - C. The government penalized him for showing the mule without a patent.
 - D. Crompton collected large sums of money from the cotton manufacturers.
4. What was the long-term effect of the mule on the English cotton industry? (*Answer: By 1812, nearly 80% of all English cotton was spun on the mule, and English cottons had become the finest in the world.*)
5. What qualities did Crompton possess that enabled him to create his invention? What aspects of his personality contributed to his financial disappointments? (*Answer: Crompton was a skilled weaver. He possessed the qualities of a successful inventor—strong powers of observation, ingenuity, and persistence. However, he did not have business ability and he was too trusting. He believed the cotton manufacturers when they promised to contribute a large sum of money in exchange for viewing the mule. As a result, Crompton received only £60, while others used his invention.*)

Lesson 13: THE INVENTOR AND THE INDUSTRY

(text pages 46–47)

Overview of the Lesson

This lesson continues the investigation into Crompton's personal standards and motivations. His shy and noncompetitive personality was considerably different from that of the shrewd, successful Arkwright. He was uncomfortable in business dealings and preferred to remain a skilled weaver. Crompton's story provides further evidence that inventors are not necessarily skillful businesspeople, and they do not always profit from their inventions. At the end of the lesson, an activity encourages the students to apply the ideas in the text.

Learning Objectives

- To understand the standards of an inventor.
- To evaluate the role that the inventor plays in the process of industrialization and technological change.

Activities and Projects

Individual essay. Each student can pretend that he or she is Samuel Crompton writing to a close friend to explain the reasons for not wanting fame and great wealth. Some mention should be made of Robert Peel's offer of an eventual partnership and of Crompton's disappointment after showing his mule to the public.

Independent project. As a supplement to the "Modern Parallel" activity on text page 47, some students may want to create their own inventions. Each student can either write a description of the invention, including diagrams, or actually produce a three-dimensional model. Along with their inventions, the students should write a short paper considering all the factors involved in producing, patenting, and marketing an invention. Some questions to consider: What need or problem does the invention solve? Where would the inventor find the materials to make the invention? Has the inventor used any ideas or parts from previous inventions? What ideas does the inventor have about the production, marketing, and distribution of the invention? Where would the inventor find the capital to accomplish all this? This activity may help students understand some of the problems and solutions of the invention process.

Using the Textbook Questions

Thinking It Through: activity on text page 46. Question 1. Cotton cloth manufacturers wanted to produce the best quality cloth possible for the least amount of money. The manufacturers wanted to use the new inventions without paying any additional expenses to the inventors. A patent for any of the inventions would have meant restricted use, plus cash outlays that would detract from their profits. The answers to the rest of this question are a matter of student opinion and will vary.

Question 2. Answers to this question are a matter of student opinion and will vary.

Question 3. Crompton was a skilled weaver who was uninterested in fame and publicity. He loved weaving and desired only to be left alone to work as his own boss. Unlike Arkwright, he didn't possess a business mind and wasn't interested in acquiring honors or great wealth.

Question 4. "They" probably referred to the cotton manufacturers. Crompton was so resentful of their competition and of their exploitation of his invention that he wanted to deprive them of the use and the profits from any new invention of his. The answers to the second part of this question will vary.

Evaluating Student Progress

1. Samuel Crompton turned down the offer of an eventual partnership in Robert Peel's cotton manufacturing firm because:
 - A. he wanted to make more money by building his own cotton mill.

- *B. he wanted to remain a weaver and be his own boss.
 - C. he preferred retirement.
 - D. it was more challenging for him to bargain with the merchants on the Cotton Exchange.
2. The story of Samuel Crompton demonstrates that:
- A. no inventor is ever justly rewarded for his inventions.
 - B. inventors are shy.
 - C. patents are very difficult to obtain.
 - *D. inventors do not always grow rich from their inventions.
3. Parliament granted Crompton £5,000 because:
- *A. of his contribution to the cotton industry.
 - B. he was cheated out of his patent.
 - C. he never patented the mule.
 - D. he was shy and ran away from publicity.
4. Compare the successes of Arkwright, Hargreaves, and Crompton. How do you account for the similarities and differences? (*Answer: Crompton and Hargreaves enjoyed similar successes as inventors. Crompton neither sought nor attained the wealth that Arkwright did. His earnings were closer to Hargreaves'. Each man achieved public recognition for his work. Both Crompton and Hargreaves were more artisans than businesspeople, and both encountered patent problems. Even though Arkwright also had patent disputes, his acute business sense enabled him to make a fortune. Crompton shunned public attention and sought the privacy to work as he pleased.*)

Lesson 14: SOLVING THE PROBLEM OF POWER

(text pages 48–51)

Overview of the Lesson

This lesson describes James Watt's important improvement on earlier steam engines and the impact of his steam engine on the Industrial Revolution. Watt's steam engine freed manufacturers from the necessity of building factories near sources of water power. Instead, they could locate their factories wherever there was a supply of laborers and good transportation facilities.

The lesson begins with a discussion of the sources of power for machinery before the start of the Industrial Revolution—human power, animal power, water power, and wind power. The uses and limitations of early steam engines are covered. Watt's experiments to improve the steam engines are also discussed. In order to acquire the money to develop his invention, Watt formed a partnership with John Roebuck, who eventually went bankrupt. After that, Watt formed a successful twenty-five year partnership with Matthew Boulton, a business owner. The lesson concludes with an activity to aid students in evaluating the impact of the steam engine on industrialization and the contributions of Watt and Boulton to its development.

Learning Objectives

- To recognize the limitations of early sources of power.
- To see the changes made possible by the invention of the steam engine.
- To examine the role both Watt and Boulton played in the development of the steam engine.
- To understand the role the steam engine played in industrialization.

Key Words and Ideas

condenser	piston
cylinder	steam engine

Historical Background

Watt's experiences in financing the development of the steam engine underline the importance of capital to the Industrial Revolution. Watt was able to build his invention only after Boulton provided the funds as well as the skilled workers. Arkwright was another inventor who needed capital to start his factory. He was able to borrow some money with the rest provided by his partners.

Activities and Projects

Small-group activity. Divide the class into small groups of three or four. Have each group choose a major industry, such as the automobile, steel, or modern textile industry, and research the sources of its power—coal, oil, electricity, solar or nuclear energy. As part of a report to the class, each group should consider the location of the industry's major factories, the problems and benefits of its major sources of power, and future sources of power, if any, for the industry.

Class field trip. Arrange a field trip to a nearby factory to see how machines are used in the production process. The students should note the source of machine power and the kinds of tasks the workers perform. If they have the opportunity, students can ask the plant manager what power problems may arise in the future, and if there are any feasible alternative sources of power. Would these alternative power sources make the factory more or less dependent on other parts of the country or on other countries in the world? Back in the classroom, discuss the students' observations of how a factory is run, the kinds of work performed in a factory, and its sources of power.

Individual project. Students can draw a "power map" of their area. They should first draw a map of their neighborhood, town, city, or state, and then locate the major factories and their sources of power—electrical, water, nuclear, steam, solar, or oil. A key should be provided on the map with a dif-

ferent symbol for each kind of power source. Students could also indicate what regions provide these sources of power.

Using the Textbook Questions

Margin question on text page 48. Of all the inventors discussed in this Part so far, James Watt possessed the strongest background in science and technology. He made scientific instruments and also worked as a surveyor. Hargreaves and Crompton were weavers, Arkwright started as a barber and wig-maker, and Highs was an uneducated worker.

Margin question on text page 50. Boulton's letter to Watt illustrates the shrewd business sense of a successful manufacturer. His concern with keeping costs down and profits high is demonstrated by his desire to build the steam engine factory near his existing one. His interest in economical production methods is further demonstrated by his decision to manufacture several engines at one time. In order to manufacture a high-quality product, he wanted to hire the best possible workers and to use the most accurate tools. He also possessed ambition and foresight, as shown in the reference to potential world markets. In his previous career, he expanded his father's toymaking business into a large manufacturing firm of 600 factory workers turning out fashionable items such as watch chains and steel jewelry. He was able to accomplish this because of his qualities of ambition, foresight, knowledge of the market, and his profit-making ability.

Analyzing the Evidence: activity on text page 51. Question 1. The steam engine was an improvement over earlier forms of power because it was more powerful and more reliable. It used less coal than earlier steam engines and was therefore less expensive to operate.

Question 2. With steam engines, factories were not dependent on the power of fast-flowing rivers. They could be located in the cities where there was an ample labor supply and convenient transportation facilities.

Question 3. The plans were too difficult for all but the most skilled iron and steel workers to follow. The textile inventions such as the jenny, frame, and mule were simple inventions and much easier to copy.

Question 4. Watt possessed technical skill and ingenuity to invent the engine. Boulton had capital and marketing ability to manufacture the engine.

Question 5. This question is a matter of student opinion; answers will vary.

Evaluating Student Progress

1. Which statement is true?

- A. Before the steam engine, animals provided the strongest source of power.
- B. The basic problem with wind power was that it wasn't strong enough.

(continued)

- *C. The steam engines used in mines in the early 1700's were slow and required a large quantity of coal.
 - D. Water power was very steady.
2. One important advantage of the steam engine was that it:
- *A. could be located anywhere.
 - B. was powered by coal.
 - C. heated water to the boiling point.
 - D. was almost as strong as horse power.
3. In the 1780's and 1790's, steam engines were used:
- *A. mainly in factories, mines, and foundries.
 - B. only in Britain.
 - C. for railroads.
 - D. for steamboats.
4. Consider this statement: "Watt's steam engine accelerated England's industrialization process." Do you agree or disagree? Why? Use evidence from the Unit Book and Research Bank to support your statement.
5. What effect did the steam engine's 25-year patent have on Watt and Boulton? on the use of the engine? (*Answer:* Watt and Boulton had the exclusive rights to build and sell the engine for the 25 years following 1775—the year their patent was granted. By 1800, there were 481 steam engines in Great Britain and 15 in the rest of Europe. Without a patent, the possibilities of the engine's uses would have spread faster, even though the machine was complicated and difficult to copy. However, the patent did protect Watt's and Boulton's rights to the engine.)

Lesson 15: INGREDIENTS OF INDUSTRIALIZATION

(text pages 52–55)

Overview of the Lesson

The lesson summarizes the factors contributing to England's industrialization and assesses the impact of these factors on the growth of the cotton industry. Advances in technology, increased food production, access to raw materials, and world markets are discussed. All these factors are interrelated. For instance, one direct result of the development of the cotton industry and the increased world demand for British cotton goods was the growth of Great Britain's merchant fleet. In turn, the further success of the cotton industry depended on the fleet's ability to control the seas and to carry raw cotton and finished cotton goods around the world. The map and charts on text pages 54–55 demonstrate the extent of the English cotton trade by 1850.

Learning Objectives

- To be aware of the various factors that affected the growth of the cotton industry in Great Britain.

- To recognize the implications of this growth for industrialization.
- To understand the interrelationship of these factors.

Key Words and Ideas

export
market

productivity
raw materials

technology

Historical Background

It is important to recognize that British cotton goods were exported to areas that were economically underdeveloped. England itself used the largest share (38%) of any individual country. Of the rest, 41% went to areas that possessed either a primitive cotton industry or none at all (Latin America, East Indies, Africa, and China). Another 19% went to areas that were developing their own cotton industry (Europe and the United States). European countries and the United States placed tariffs on British textiles so that their own textiles could compete. The areas with undeveloped textile industries did not place any tariffs on British cottons.

Activities and Projects

Individual Research. Have the students investigate how factory locations are chosen today. They can consult with the management of a company that is building a factory nearby. Or they can write to the public relations department or community relations department of a major manufacturer. Locally, a community zoning board or planning commission might be a source of information. Students should look into the various factors that must be considered: labor supply, sources of power, availability of transportation, access to raw materials and to markets.

Small-group map activity. Divide the class into small groups. As an accompanying activity to the study of the map of the British cotton trade on text pages 54–55, have the groups study the growth of the British empire during the 1800's. Students can discover what countries and regions were added to the empire as the century progressed and when they became part of the empire. They should also find out how the empire aided England's industrialization process, and the types of markets and/or raw materials that each country provided for England.

Using the Textbook Questions

Margin questions on text page 55. First question. If England had lost a naval war to France, the cotton industry would have been ruined. With England's merchant fleet crippled or destroyed, the cotton industry's vital ties to the world's cotton-growing area and cotton cloth markets would have been severed.

Second question. If Spain had regained control of Latin America and prevented trade with England, the English cotton industry would have lost a significant chunk of its market. According to the chart on text page 55, Latin America accounted for 22% of England's cotton cloth market. (That is why England favored the Monroe Doctrine of 1823, which supported Latin America's independence from Spain.)

Third question. The abolition of slavery in the United States might have slowed raw cotton production, disrupting the flow of cotton to England. In fact, this happened for a short time but not significantly. By the 1880's, the southern United States produced more raw cotton for export without slavery than it had in 1860 with slavery.

Fourth question. Students should refer to their lists of ingredients of industrialization. Answers may vary.

Evaluating Student Progress

1. What effect did the new steam-driven engines have on the cotton industry?
 - *A. They increased the amount of cotton cloth that could be produced.
 - B. The cost of cotton cloth went up.
 - C. Factory workers became less efficient.
 - D. Fewer factory workers were employed in cotton production.
2. The increasing supply of raw cotton imports had which of the following effects on England's cotton industry?
 - A. The raw cotton drove up the prices of the finished cotton goods.
 - B. Factories had to shut down because they couldn't process all the raw cotton.
 - *C. The cotton industry grew rapidly and new cotton-growing areas were cultivated for export to England.
 - D. The production of cotton remained fairly steady for the years 1750 to 1850.
3. The changes in agriculture helped industrialization by:
 - A. driving farmers to the city.
 - *B. producing more food for the factory workers in the growing cities.
 - C. forcing farm laborers to take factory jobs.
 - D. encouraging people in rural areas to start inventing new machines.
4. Study the map on text pages 54–55. What role did British territories play in the cotton trade? (*Answer:* British territories provided markets for British cotton goods. Some of them, such as the British West Indies, provided raw cotton for British mills.)
5. What role did world markets play in industrialization? (*Answer:* There would have been no reason to produce as many cotton goods if the rest of the world did not want to buy them. Without these foreign markets, industrialization would have been considerably slowed.)

Lesson 16: WHAT HAPPENED TO THE WEAVERS?

(text pages 56–61)

Overview of the Lesson

By the early 1800's, the cotton industry's new technology was bringing great change to the lives of the handloom weavers. The weavers were faced with the decision of choosing either to work in the new factories for a secure wage or to work on their own with much less security but with more independence. This lesson establishes this central dilemma in the lives of individuals by the device of a fictitious debate between two weavers, John and Peter Wilkes. The weavers' discussion touches on their various concerns: factory conditions, wages, length of the working day, and financial security. What happened to the Wilkes brothers actually happened to thousands of families throughout England. The charts on text page 61 show the relationship among the handloom weavers' earnings, the number of handloom weavers, and the number of power looms in Great Britain between 1795 and 1845.

Learning Objectives

- To understand the dilemma confronting the handloom weavers and the choices they had to make.
- To be aware of the conditions of English factory life in the early 1800's.

Key Words and Ideas

handloom power loom

Activities and Projects

Small-group game. If possible, obtain the game "Manchester" (available from ABT Associates Inc., 55 Wheeler Street, Cambridge, Massachusetts 02138). Players will be able to assume the roles of millowners, worker families, farmers, a squire, and a banker. In order to avoid the workhouse, workers' can become either farm laborers for the squire and farmers, self-employed handloom weavers, or weavers running power looms in the cotton factories of Manchester. The fluctuating market prices of wheat and cloth, and different costs of living, are other elements of this game. Eight students can participate at one time.

Class activity. Divide the class into two groups. One group can be the editorial staff of a newspaper of the early 1820's that supports handloom weavers and opposes factory work. The other group can be the editorial staff of a newspaper of the same period that is read by workers in textile factories. The students can formulate an editorial policy for each of their papers and suggest

story ideas for one day's edition. Then each group should write a sample editorial stating the policy of their paper and present it to the class as a whole. They should also list the titles of articles that will appear in one day's edition.

Using the Textbook Questions

Margin questions on text page 59. First question. This question is a matter of student opinion; answers will vary.

Second question. These rules and fines indicate the harsh discipline in the early factories. Workers were expected to work when sick and to be on time always. Some rules seem contradictory: workers were fined for being dirty, yet they were not allowed to wash themselves.

Thinking It Through: activity on text page 59. Question 1. John wants the freedom to make his own rules and refuses to follow factory rules he considers harsh and unfair. He mentions that the factories are attracting only those people who have failed at other work and are working in the factories as a last resort. Furthermore, he is satisfied with his present earnings and way of life.

Peter argues that his earnings have dropped during the last six years. Factory work is light, the pay is good, and the amount of time spent on the job would be the same as if he were a self-employed weaver. He considers the factory rules necessary and reasonable.

Question 2. John valued his independence. Peter wanted a secure income.

Question 3. This question is a matter of student opinion; answers will vary.

Margin questions on text page 60. First question. Peter gained a secure living, but lost his independence.

Second question. John kept his independence, but his earnings dropped significantly.

Third question. Peter Wilkes' story demonstrates that willingness to work for someone else was one way of "making it" in the industrial system.

Margin questions on text page 61. First question. Handloom weavers' wages had already fallen from 33 shillings a week to 22 shillings a week by the time the first power loom factory was built in 1806 and before power looms had become a significant economic factor. Even though wages were dropping, the number of handloom weavers rose steadily until 1820. It wasn't until wages fell to nine shillings a week (one shilling below Tom Moore's average income), that the number of weavers leveled off and then declined. Handloom weavers' wages fell thirteen shillings during the years 1806 to 1820 when there were only a few power looms in use.

Second question. John Wilkes' story reflects the statistics from the tables on text page 61. In 1800, his earnings were 25 shillings a week; in 1806, his earnings were 22 shillings a week. And by 1827, John's earnings fell to six shillings a week. His earnings were the same as the average weekly earnings for handloom weavers in those years.

An Investigation: activity on text page 61. The answers to these questions will depend on the results of students' research.

Evaluating Student Progress

1. Power looms were introduced because they:
 - *A. wove cotton cloth more cheaply than handloom weavers could.
 - B. lowered weavers' wages.
 - C. did not use much coal.
 - D. could be used in individual houses rather than in factories.
2. Many cottage weavers chose factory work over work in the home because:
 - A. there were fewer strict rules.
 - *B. wages were higher in the factories.
 - C. the air was better.
 - D. a weaver could have a good time talking to his friends in the factory.
3. Referring to the charts on page 61, what happened to the average weekly earnings of handloom weavers as the number of cotton handloom weavers decreased?
 - *A. Earnings fell.
 - B. Earnings remained the same.
 - C. Earnings increased.
 - D. Earnings fell at first, then increased after 1806.
4. Why do you think so many people became weavers after 1795 even when wages were falling? (*Answer:* During the years 1795 to 1810, handloom weavers' earnings averaged from 20 shillings up to 33 shillings a week. [See the tables on text page 61.] This was considerably more than many other trades at this time, and it must have been a powerful incentive for people to enter the weaving trade.)
5. What effect did the new power looms have on the workers who ran them? (*Answer:* The machines made factory work less strenuous because weavers no longer had to operate the heavy machinery of the handlooms. All the workers had to do was to keep the power looms operating. However, this also made the work very monotonous.)

Lesson 17: THE REVOLUTION IN IRON (text pages 62–65)

Overview of the Lesson

This lesson investigates the importance of developments in the iron industry to England's industrialization. Henry Cort's invention of the puddling-and-rolling process for developing a high-quality iron cheaply and efficiently freed England from the need to import iron. By 1840, England could produce high-quality iron so cheaply that it eventually produced more iron than the rest of the world combined. However, Cort, like many of the inventors of his time, was unable to benefit financially from his invention.

Learning Objectives

- To understand the role that the puddling-and-rolling process played in the iron industry.
- To recognize the significance of the growth of iron production to the Industrial Revolution in England.

Key Words and Ideas

charcoal
coke

foundry
ironworks

pig iron
puddling and rolling

Historical Background

Cort's process of producing high-quality and inexpensive iron had many important effects for England. The improved iron made it easier to build machines, factories, and, eventually, railroads. In addition, the need to transport iron and coal increased the demand for better roads, canals, and railroad lines. The iron industry affected all segments of English industry.

Activities and Projects

Class discussion. Discuss how Cort received his patent and the events leading up to his loss of the patent. Do the students think that English law was fair in turning over Cort's patent rights to the government? Take a class vote on the question.

Individual research. Some students may want to choose a segment of the British economy in 1850—mining, farming, transportation, or heavy industry—and investigate the ways in which the iron industry contributed to that segment's growth. In a paper or oral report, students can consider the improvements that were made and how these improvements affected English life by the mid-1800's.

Using the Textbook Questions

Margin questions on text page 64. First question. Arkwright, Watt, and Boulton all earned more money than Cort received for his pension. Crompton received a £5,000 gift from Parliament, while Cort received only £200 a year for six years until his death. Hargreaves was rich enough to leave £4,000 to his heirs. Certainly, Cort's £200 a year was more than the average handloom weaver ever made—even in the best of times. Weavers' earnings reached a peak of 33 shillings a week. This amounted to only £83 a year.

Second question. The answers to this question will vary according to the students' list of the ingredients of industrialization.

Margin questions on text page 65. From the evidence in this lesson, the students could correctly infer that any foundry could use Cort's process without hiring or firing workers. Therefore, workers in the iron industry were certainly less affected by the new technology in their industry than the handloom weavers had been.

Second question. This list could include iron and steel for railroads, factories, ships, automobiles, buildings, and many more products.

Evaluating Student Progress

1. Cort's puddling-and-rolling process accomplished all the following except:
 - A. it made hammering unnecessary.
 - B. it sped up iron production.
 - *C. it made the iron heavier.
 - D. it improved the quality of iron.
2. Which of the following was a factor that helped England's iron industry in the early 1700's?
 - A. England imported cheaper iron from Sweden and Russia.
 - B. England's forests were swiftly disappearing.
 - *C. England possessed large deposits of coal and iron ore.
 - D. A constant source of heat had to be maintained for the smelting process.
3. Cort did not get a patent because:
 - *A. his partner's father stole government funds.
 - B. Peter Onions invented the puddling process first.
 - C. his idea was not original.
 - D. an inventor cannot sell an invention before receiving a patent.
4. In what ways was scientific knowledge a factor in any of the inventions discussed in this Part? (*Answer:* Only James Watt needed some knowledge of the scientific advances of his time to make the improved version of the steam engine. The jenny, frame, mule, and Cort's puddling-and-rolling process needed the mechanical skills and keen observations of their inventors, but a background in science was not necessary.)
5. From the evidence in the first two Parts of this Unit, how important was transportation to England's industrialization? (*Answer:* In the 1700's, England's canals made it possible for large landowners, such as George Thompson, to ship their grain to markets in other regions of the country. During the 1800's, the merchant fleet brought raw cotton to England's textile factories and shipped finished cotton products to markets all over the world. By the mid-1800's, the development of the railways made it possible to transport manufactured goods, food, and raw materials quickly and cheaply from one region of England to another.)

Lesson 18: INVENTIONS AND THEIR APPLICATIONS

(text pages 66–67)

Overview of the Lesson

This lesson consists of a timeline summarizing the important technological improvements of the first 100 years of the Industrial Revolution in England. The timeline should be an important aid to the students in reviewing the events in Part 2. Improvements in textile technology appear above the timeline, and advances in the heavy industries of iron, steam power, and railroads appear below the timeline. There is also a summary of important industrial developments that occurred before 1750. The lesson ends with an activity that helps students evaluate what they have learned in the Part.

Learning Objectives

- To be aware of the chronological sequence of important technological improvements in England from 1750 to 1850.

Key Words and Ideas

by-product rotary engine

Activities and Projects

Class activity. The class can role-play members of the House of Commons in 1800. The House of Commons must decide how to award £10,000 to “the person or persons who contributed most to the Industrial Revolution.” The award may be posthumous. (In such a case, the money will be awarded to the heirs.) The candidates are: James Watt, Matthew Boulton, Henry Cort, Peter Onions, Abraham Darby, Thomas Highs, John Kay, Richard Arkwright, Samuel Crompton, James Hargreaves, and Edmund Cartwright (the inventor of the power loom). The students, as Members of the House in debate, can argue their choices. After the debate, take a vote as to who the recipient (or recipients) may be and how the prize money should be divided.

Individual Research. The invention of the steam engine and the improvements in iron production were pivotal to the development of the railroad. The students can write research papers investigating the early years of the railroads in England. They should answer such questions as: In what ways did the steam engine and the iron industry contribute to the building of the first railroads? Who was George Stephenson and what was his contribution to England’s industrialization? What were the railroads’ effects on English life? (You might want to refer your students to pages 118–119 of the Research Bank for some background information.)

Using the Textbook Questions

Expressing Your Views: activity on text page 67. Questions 1–5. Students should refer to their lists on personal success and the ingredients of industrialization for the answers to these questions.

Evaluating Student Progress

1. What two important inventions were patented in 1769?
 - A. The spinning jenny and the power loom
 - B. The water-frame and the spinning jenny
 - *C. The steam engine and the water-frame
 - D. The locomotive and the mule
2. How long did it take for the iron foundries and coal mines to utilize Watt and Boulton's steam engine?
 - A. Ten years
 - B. Five years
 - C. Twenty-five years
 - *D. Immediately
3. Richard Arkwright built the first spinning mill. Who built the first weaving mill?
 - *A. Edmund Cartwright
 - B. James Hargreaves
 - C. Samuel Crompton
 - D. Richard Arkwright
4. How was the Liverpool–Manchester railroad line a technological advance over the Stockton–Darlington line built five years earlier? (*Answer:* Not all the trains in the Stockton–Darlington line were powered by steam. Some of them used horses to pull the cars. As a commercial railroad, it transported goods but not passengers. The Liverpool–Manchester line was completely run by steam power and carried passengers as well as goods.)
5. Find evidence from this timeline to prove the following statement: “Each invention of the English textile industry of the 1700’s either solved a problem or met a demand for the manufacture of cotton cloth.” (*Answer:* The flying shuttle improved the weaving process because it enabled weavers to produce wider cloth at twice the speed of an ordinary shuttle on a loom, thus increasing the demand for thread. The spinning jenny with many spindles met the demand for more thread by increasing thread production. However, the thread was not strong enough for all parts of the weaving process. The water-frame spun, stretched, and twisted thread in one operation. It produced strong but coarse thread. The mule spun thread that was both fine and strong. The power loom did the work of several handloom weavers in a shorter amount of time.)

part **3** **COSTS AND BENEFITS:** **Effects of Industrialization**

Theme and Overview

Over the years, people have debated the effects of the Industrial Revolution and whether or not the costs have outweighed the benefits. In Part 3, this topic is examined through the device of a debate. Two imaginary debaters, Mr. Oppem and Mr. Pessim, present their views to the London Debating Society in 1851. Mr. Oppem, the optimist, represents those people who believe that the Industrial Revolution was worth it because it has brought technical advances, improved living standards, and prosperity to many people. On the other side, Mr. Pessim, the pessimist, believes that industrialization has brought suffering to a large segment of the population and has undermined society's sense of values. To support their arguments, the two debaters use evidence concerning population trends in England, living conditions, wages, prices, and the problems of child labor.

Following the debate, Part 3 describes reactions to industrialization during the 1700's by several groups in England. These groups include the Luddites, Owenites, and Chartists. There is a discussion of various attempts to deal with the effects of industrialization through the vote, by unionizing, and by altering the political and economic systems. Part 3 and the Unit conclude with a discussion of industrialization in our own time and its possible effects on developing nations.

Lesson 19: THE DEBATE: THE OPENING STATEMENTS (text pages 70–71)

Overview of the Lesson

In this lesson, Oppem and Pessim present their opening arguments of the debate. Oppem believes that the Industrial Revolution brought favorable changes to England since it improved the country's annual output and raised the standard of living for most people. Oppem emphasizes the "progress" that resulted from the Industrial Revolution. Pessim believes that the changes created by the Industrial Revolution brought social upheaval and poverty for many people in England. He maintains that it was the working people, especially the handloom weavers, who suffered the loss of their independence and way of life. In Pessim's view, the Industrial Revolution did not benefit society as a whole because a large part of the population suffered.

Throughout Part 3, both sides present and discuss statistics that deal with

various aspects of the Industrial Revolution. As an introduction, this lesson contains a skills box explaining the different ways in which a set of statistics can be interpreted to support opposing arguments.

Learning Objectives

- To become aware of the basic benefits and costs of industrialization.
- To understand how to interpret and use statistics.

Key Words and Ideas

annual output census statistics

Activities and Projects

Small-group activity. Divide the class into small groups. As an introduction to the use and interpretation of statistical evidence, each group should consider the following statement: “Life in the United States improved during the years 1960 to 1975.” Then the students should study the following statistics in conjunction with this statement. (Charts continue on next page.)

Civilian labor force 16 years old and over (in millions)

1960	1965	1970	1975
69.6	74.5	82.7	92.6

Average weekly earnings of production workers in private industry (in constant [1967] dollars)*

1960	1965	1970	1975
\$90.95	\$100.59	\$102.72	\$101.67

(* Constant dollars are used so that comparisons of figures for different years will not be misleading because of changes in the value of the dollar.)

Deaths per 100,000 population

1960	1965	1970	1975
952	943	945	896

Unemployment rate (% of labor force)

	1960	1965	1970	1975
Whites	4.9	4.1	4.5	7.8
others	10.2	8.1	8.2	13.9
Teenagers	14.7	14.8	15.3	19.9

Source: U.S. Bureau of the Census, *USA Statistics in Brief 1976: A Statistical Abstract Supplement*, 1976. Some statistics computed by U.S. Department of Labor.

Ask each group how it would interpret the statistical evidence. In light of this evidence, do most students in the groups agree or disagree with the statement? Why? Each group should write a paper explaining its position and interpretation of the data.

Individual Writing Assignment. As the debate between Oppem and Pessim progresses, students should write their impressions of each stage of the debate in their notebooks. Under a heading for each topic: population, living conditions, wages and prices, and child labor, students can comment on the strength of each speaker's argument and use of the evidence. At the end of the debate, students will then be able to decide the winner of the debate.

Using the Textbook Questions

Margin questions on text page 70. First question. Oppem cares most about the benefits resulting from the technological changes of the Industrial Revolution. He cites the increased annual economic output and the improvements in travel, communication, and machinery. He is confident that a healthy industrial economy will eventually solve the problems of the poor and unemployed. Pessim feels that the upper and middle classes have gained from the new technology at the expense of the working poor. He states that the majority of people in England were forced to forego their independent way of life as artisans to work in factories. If the majority of people suffered, then English society as a whole has not benefited.

Second question. Answers to this question are a matter of student opinion and will vary.

Third question. The story of the Moores seems to support Pessim, since the family lost its independence and went on welfare. The living standard of the Whitefield family also declined during the period of enclosure and industrialization. John Wilkes' case is more ambiguous. Oppem points out that the handloom weavers did lose their jobs, but could go into other kinds of work in the industrial economy. There were factory jobs for both John and Peter Wilkes, but John chose not to take any. The fact that John Wilkes *did* suffer during the Industrial Revolution and many weavers *did not* have factory jobs

waiting for them supports Pessim's arguments. As for Peter Wilkes, he did lose his independence (a point for Pessim), but his standard of living rose. He earned 22 shillings a week during the years 1806 to 1827, but living costs dropped. This is a point for Oppem.

Evaluating Student Progress

1. Which of these items is a negative result of England's Industrial Revolution?
 - *A. Handloom weavers lost their incomes.
 - B. Railroads reduced travel time.
 - C. Tools and machinery were improved.
 - D. Annual output of the economy increased.
2. Which of these items is a positive result of England's Industrial Revolution?
 - A. The living standard of the working people declined.
 - B. The living standard of the working people remained the same.
 - C. Many artisans lost their independence.
 - *D. The living standard of the upper and middle classes improved.
3. Both Oppem and Pessim would agree that:
 - A. the living standard of the working people declined.
 - B. it is better to work in a factory than at home.
 - C. the handloom weavers did not lose their jobs to machines.
 - *D. the annual economic output increased.
4. How does each debater interpret the phrase "benefited society as a whole"?
(*Answer:* Oppem interprets the phrase with respect to increased national wealth and power. Pessim sees it in terms of number of people who either benefited or suffered. To Oppem, increased annual economic output and the growth of railroads and other means of communication are evidence of a growing and "progressive" nation. Pessim believes that if a large segment of the population – the working people – suffered during the Industrial Revolution, then the nation as a whole did not benefit.)

Lesson 20: THE ARGUMENT OVER POPULATION

(text pages 72–75)

Overview of the Lesson

This lesson examines England's population trends during the late 1700's and early 1800's and how these trends are the result of industrialization. Oppem uses evidence of population growth and the drop in the death rate to argue that the country's living standards have improved. Pessim points to statistics that indicate an increase in the death rates in industrial cities and among the working class. These statistics, he says, show that a large portion of the English population does not enjoy improved health conditions. Oppem counters with statis-

tics that show a decline in the infant death rate. Neither side scores an advantage because the data can be used in different ways.

Learning Objectives

- To understand major population trends in England during the years 1730 to 1850.
- To see how these trends can be interpreted by people who hold opposing viewpoints.

Key Words and Ideas

child death rate	life expectancy
hygiene	vaccines

Historical Background

In his argument, Pessim uses statistics from the city of Manchester as an example of how death rates in the industrial cities rose during the 1830's and 1840's. Some historians believe that the rising death rates during these years were not the direct result of the Industrial Revolution, but were due to the failure of the cities to introduce public health measures. City officials were unable to cope with the tremendous influx of factory workers. The rapid urban growth of the industrial age was a new phenomenon, and no modern city government had been forced to deal with it before. There was an urgent need for effective sewage disposal and uncontaminated drinking water. According to some historians, this ignorance of basic public health principles may have been an important factor in the rising death rate. The death rate remained at 22 persons per 1,000 throughout the 1850's and 1860's. Then the death rate declined as public health measures improved.

Activities and Projects

Small-group chart project. Charts, tables, and graphs are effective ways to present statistical data. In this lesson, the students have been reading bar graphs compiled from data about death rates and population growth during the 1700's and 1800's in England. Divide the students into small groups and have them refer to the data that they have found for the "Investigation" activity on text page 75. Each group should try to organize and convey the data in graph form. Bar graphs, line graphs, or pie charts can be used. Groups can then present their graphs to the class.

Individual research. For centuries England had suffered from periodic epidemics of smallpox, typhoid, and typhus. However, the rapid urbanization of the Industrial Revolution, the resulting overcrowding of the cities, and poor sanitation facilities were ideal conditions for epidemics. Students can inves-

tigate the various diseases that swept through the English cities at this time, the preventive measures — if any — that were taken to control them, and if there was any debate over what measures to take.

Using the Textbook Questions

An Investigation: activity on text page 75. The answers to these questions will depend on the results of students' research. They should keep in mind that birth and death rates are much lower in the United States today than they were in England during the 1800's.

Evaluating Student Progress

1. England's population rose between 1750 and 1850 because:
 - A. vaccinations and drugs prevented many diseases.
 - B. more people were moving to the cities.
 - C. the average age of marriage dropped, while the birth rate rose.
 - *D. the death rate fell, and the birth rate remained constant.
2. Which of the following statements is false?
 - A. The death rate in the industrial cities was higher than in the rest of the country.
 - B. The infant death rate for the working class was higher than the infant death rate for other classes.
 - C. The infant death rate in London steadily decreased after 1750.
 - *D. The death rate for England and Wales rose sharply after 1790.
3. Both Oppem and Pessim agree that:
 - A. the declining death rate during 1730 to 1810 was a positive result of the Industrial Revolution.
 - B. the increasing death rate after 1820 was a negative result of the Industrial Revolution.
 - *C. the declining death rate of the 1700's was not a result of the use of vaccines and medicines.
 - D. the workers benefited from the Industrial Revolution.
4. What reasons could you give for the longer life of the gentry in 1840 as compared to the tradespeople and laborers? (*Answer:* The gentry were better fed and did not have to do heavy work or live in crowded, unhealthy conditions.)
5. "The poor suffered more in the cities during the Industrial Revolution than they did in the countryside after enclosure." Do you agree or disagree with this statement? Why? Use evidence from this and previous lessons to support your answer.

Lesson 21: THE ARGUMENT OVER LIVING CONDITIONS

(text pages 76–79)

Overview of the Lesson

This stage of the debate focuses on living conditions in the cities. As evidence to support his position, Oppem quotes authorities who see an improvement in living conditions, while Pessim uses evidence that points to a decline. Both agree that city slum life is squalid, but Oppem argues that slum conditions have always been bad. Pessim answers that with the increased growth of the industrial cities, there are more people living in slums than ever before. The lesson ends with activities that enable the students to evaluate the arguments and to contrast modern city conditions with those of early industrial England.

Learning Objectives

- To understand the impact of industrialization on living conditions in the cities.

Key Words and Ideas

slums urban

Activities and Projects

Individual research. Some students may want to write a research paper dealing with some of the problems of living in one of the following cities in the 1800's: Manchester, Liverpool, Birmingham, Leeds, or London. Some topics for study could be: sewage disposal, treatment of drinking water, access to health care facilities, and conditions in the slum districts. Students can use the library's card catalogue under such classifications as "slums," public health," and "urbanization." They should identify the problems and then discuss the solutions and preventive measures—if any—that were adopted.

Class debate. Divide the class into two groups to debate the following statement: "Resolved: No society should permit the rapid growth of its cities without planning for proper housing for its inhabitants, adequate water supplies, and effective sewage systems." The debate teams can gather evidence to support their positions from this lesson and from their own research.

Using the Textbook Questions

Analyzing the Evidence: activity on text page 79. Answers will vary according to student opinion.

An Investigation: activity on text page 79. The answers to these questions will depend on the results of students' research.

Evaluating Student Progress

1. On which of the following points do Oppem and Pessim agree?
 - *A. Cities grew rapidly from 1770 to 1850.
 - B. Conditions in cities improved from 1770 to 1850.
 - C. Conditions in cities worsened from 1770 to 1850.
 - D. Death rates in the cities rose from 1770 to 1850.
2. Refer to the chart of the growth of English cities on text page 78. Which of the following were the two fastest-growing cities?
 - A. Birmingham and Leeds
 - B. Liverpool and London
 - C. Leeds and Manchester
 - *D. Manchester and Liverpool
3. Dr. Marshall maintains that by the early 1800's the plague and bad fevers so widespread in London in earlier years:
 - *A. had been eliminated due to improved sanitary conditions.
 - B. were still common.
 - C. had been eliminated due to the use of new vaccines.
 - D. increased because of poor medical care.
4. Why did Birmingham, Manchester, and Liverpool grow faster than London from the 1770's to 1850? (*Answer:* The key industries that started the industrialization process were located in these cities. Birmingham was the center of the iron industry, Manchester was the center of the cotton industry, and Liverpool was the port that handled the export and import of cotton. The laborers and artisans of the countryside flocked to these cities to work in the factories and on the docks.)
5. Mr. Pessim says at the end of this lesson, "Even if they [the slum dwellers] now have a little more money for food and clothing, I say that they are worse off than before." What does he mean? (*Answer:* Pessim believes that by moving to the cities, the slum dwellers gave up the fresh air and gardens they had in the countryside. Oppem would probably counter that the extra money they make compensates for the loss of the country air and gardens. They have more money; therefore they have benefited from industrialization.)

Lesson 22: THE ARGUMENT OVER WAGES AND PRICES

(text pages 80–81)

Overview of the Lesson

In this lesson, the debate focuses on the wages of factory workers during the years 1790 to 1850 and the prices they had to pay for food, products, and services. Although prices rose faster than wages during the years of the Napoleonic Wars (1790–1815), by 1850 factory workers were earning 41% more than

they had in 1790, and they were paying 16% less for their goods. Oppem points to this increased purchasing power as a benefit of industrialization.

Pessim maintains that Oppem ignores three important factors: the suffering of many workers in the years 1790 to 1815, the hardships of periodic unemployment caused by the business cycles of industrial society, and the fact that other workers, such as handloom weavers and agricultural workers, are left out of the statistics. The lesson features a chart and graph of the wage and price index for these years, and a skills box explaining how to interpret and use such indexes.

Learning Objectives

- To understand the wage and price trends in England during the years 1790 to 1850.
- To understand the functions of a price index.
- To be able to read a graph based on wage and price indexes.

Key Words and Ideas

unemployment wage and price index

Activities and Projects

Small-group research. Oppem states that wars always seem to drive up prices. Divide the class into small groups to investigate the effects of World War II, the Korean War, or the war in Vietnam on wages and prices in the United States. Some groups may wish to compare their findings with the effects of the Napoleonic Wars on wages and prices in England.

Individual project. Following are the consumer price indexes in the United States from 1960 to 1975:

Consumer Price Indexes 1960–1975					
	1960	1965	1970	1974	1975
Index	88.7	94.5	116.3	147.7	161.2

Source: U.S. Bureau of the Census, *USA Statistics in Brief 1976: A Statistical Abstract Supplement*, 1976.

Students can plot a graph of these consumer price indexes similar to the one on text page 80. What is the overall trend of consumer prices since 1960? How does this trend compare with the major trend in prices in England from 1790 to 1850?

Evaluating Student Progress

(Questions 1–3 refer to the wage and price graph on text page 80.)

1. Which of the following statements correctly describes wage and price trends for the years 1790 to 1810?
 - A. Both wages and prices fell.
 - B. Wages went up, but prices fell.
 - C. Prices went up and wages fell.
 - *D. Wages went up, but prices went up even more.
2. Which of the following statements correctly describes wage and price trends for the years 1815 to 1850?
 - A. Prices rose and wages fell.
 - B. Wages and prices rose.
 - *C. Prices fell more than wages.
 - D. Wages and prices remained steady.
3. Which of the following occurred during 1750 to 1850?
 - A. Unemployment fell.
 - B. Farm workers' wages fell.
 - *C. Factory workers' wages rose and prices dropped.
 - D. The majority of workers were employed in factories.
4. The wage and price trends for the years 1790 to 1815 would tend to prove which debater's arguments? What about the years 1815 to 1850? (*Answer:* The fact that prices rose and wages fell during the first few years of industrialization would tend to support Pessim's argument. As wages rose and prices fell during 1815 to 1850, the workers' purchasing power grew stronger. This would tend to support Oppem's argument.)
5. Do you agree with Oppem's statement at the end of this lesson that "farm workers and handloom weavers were only indirectly affected by industrialization"? (*Answer:* Answers may vary here. Farm workers were more directly affected by enclosure than by industrialization. Handloom weavers were only partially affected by industrialization. The big drop in their wages occurred before the widespread use of power looms. But after 1820, they gradually lost their livelihood and independence as more and more power looms came into use.)

Lesson 23: THE ARGUMENT OVER CHILD LABOR

(text- pages 82–85)

Overview of the Lesson

This lesson deals with the treatment of children during the Industrial Revolution. Pessim maintains that the demands of factory work cause excessive and systematic exploitation of children. Oppem argues that before industrialization children were treated just as badly, if not worse, in the cottage industries and as

apprentices in the trades. He also cites important labor legislation of the 1830's and 1840's designed to limit working hours and to improve conditions. The lesson ends with activities that require students to compare and to evaluate the circumstances of child labor today with those of the Industrial Revolution.

Learning Objectives

- To understand and evaluate child labor before and after industrialization.

Key Words and Ideas

child labor	overseer
industrialist	parish

Historical Background

The issue of child labor was a subject of debate in England even before the start of the Industrial Revolution. A concern of many reformers was the mistreatment of apprentices in the London trades. Among others, William Blake, the poet, took an active interest in their plight.

Orphans suffered the most. This was true for both apprentice labor before the Industrial Revolution and factory labor later. Many parishes did not want to pay the support of orphans and abandoned children. Factory owners would pay an agreed amount for each child, and the parishes would send these children to the factories by the cartload. The Factory Act of 1833 eliminated the worst abuses of child labor.

Activities and Projects

Individual research. Some students may want to investigate the events leading up to the passage of the Factory Act of 1833, the Mines Act of 1842, or the Ten Hours Act of 1847. The Research Bank contains some background information, and the public library would be a good place to find a detailed overview of English history dealing with the events of this period. Also, E. Royston Pike's *Hard Times: Human Documents of the Industrial Revolution* (Praeger, 1966) is an excellent source of information. Students should investigate the role of parliamentary committees in alerting Parliament and the general public to child labor abuses. What was some of the testimony? Who were the witnesses? What was the public reaction to the various committee findings?

Class activity. As an accompaniment to the "Modern Parallel" and "Thinking It Through" activities on text page 85, students can find out what the child labor laws are in your state. The state or local employment commission and the public library are good sources of information. Then take a poll to see how many students have worked or are working. To what extent are the child labor laws enforced? Do the students consider the existing laws fair? Why or why not? Some students may want to poll others in school. What are their results?

Using the Textbook Questions

A Modern Parallel: activity on text page 85. The answers to these questions will vary according to student opinion and experience. Students are asked to think about the role of society in relation to the needs of young people who want to work.

Evaluating Student Progress

1. On which of the following points would Oppem and Pessim agree?
 - A. Child labor conditions during the Industrial Revolution were worse than before.
 - B. Child labor conditions improved during the Industrial Revolution.
 - *C. The Factory Act of 1833 improved conditions for children working in the textile mills.
 - D. Apprentices in the trades were treated more harshly than children in the factories.
2. Which of the following statements is correct?
 - A. Children were not whipped in factories.
 - *B. The labor laws of the early 1800's improved working conditions for children.
 - C. Cotton manufacturers never employed children under nine years old.
 - D. Apprentices in the trades were treated worse than children in the factories.
3. Which of these changes was accomplished by the Ten Hours Act of 1847?
 - A. Banned boys from working less than ten hours a day.
 - B. Limited work in the mines to ten hours a day for girls under eighteen years old.
 - *C. Limited work for children under eighteen years old and all females to ten hours a day.
 - D. Limited children ages nine to thirteen to working ten hours a day in textile factories.
4. What was the purpose of the Factory Act of 1833, the Mines Act of 1842, and the Ten Hours Act of 1847? (*Answer:* Their purpose was to protect children so that they would not overtire and injure themselves by working long hours in the factories. These laws did not eliminate child labor.)
5. What do you think was the general attitude of adults toward child labor before and during the Industrial Revolution? How do these attitudes differ from present attitudes? (*Answer:* Children of the working classes in England before and after the Industrial Revolution were expected to help the family and to supplement the family income. Before the Industrial Revolution, children under ten years old often worked in the fields and at home doing light housekeeping and taking care of younger children. They also helped their parents in the cottage industries. When they reached ten years of age, they were usually apprenticed to tradespeople or became servants in the households of wealthier families. During the Industrial Revolution, children

worked in factories and mines. If children under ten years old stayed at home, they were expected to help with family chores. It wasn't until the Factory Acts of 1833 that children under nine years old were excluded from textile factory work. The Ten Hours Act of 1847 didn't exclude children under eighteen years old from working, but it did limit work to ten hours a day.

The second part of the question is a matter of student opinion and answers will vary. But it should be noted that children in the United States today live more protected lives than their counterparts in England 150 years ago. Laws are enacted to keep children in school until they are 16 years old. The age at which a person legally enters adulthood is now 18. Compare this with the fact that 200 years ago many children left home to start their apprenticeships at the age of ten or eleven.

Lesson 24: THE CONCLUDING STATEMENTS OF THE DEBATE (text pages 86–87)

Overview of the Lesson

In this lesson the debaters sum up their arguments. Pessim concludes that the Industrial Revolution caused hardships and suffering and destroyed the independence, dignity, and self-respect of many working people. He feels that basic decency and a healthy sense of values has been replaced with greed, the profit motive, and exploitation of others. Oppem answers that exploitation and greed were prevalent before industrialization and did not begin with it. He maintains that industrialization has benefited society because it has produced more material goods, making life easier for many people. Also, he cites the child labor laws as proof of a new awareness of social problems. The lesson ends with an activity that enables students to evaluate the evidence and to form their own opinions about the benefits and costs of the Industrial Revolution.

Learning Objectives

- To be able to evaluate the evidence on the Industrial Revolution and to be able to weigh its costs and benefits to society.

Activities and Projects

Class discussion. During the Industrial Revolution, several authors wrote novels based on the lives of the working class and the factory owners. Two of the most famous were Charles Dickens' *Hard Times* and Elizabeth Gaskell's *Mary Barton*. Assign these books as readings for the class. Some students might also look into the authors' personal views on the Industrial Revolution

and compare their views to the plots of the respective novels. Initiate a class discussion on the novels and their authors. Some points to consider would be: What aspects of the Industrial Revolution do these novels portray? Who are the main characters? What roles do they represent in English society of the 1800's? What does each author seem to care about? How accurately do these novels portray the conditions of the Industrial Revolution?

Individual research. The students can choose one or two books in the history of the American labor movement that detail how workers' lives have changed over the last 150 years in major industries in the country. They should contrast and compare the lives of workers in the farms, factories, and mines. Then students can compare these conditions with the lives of the textile workers in England during the early Industrial Revolution.

Using the Textbook Questions

Expressing Your Views: activity on text page 87. The answers to these questions are matters of student opinions and will vary.

Evaluating Student Progress

1. Pessim would disagree with which of the following statements?
 - *A. The Industrial Revolution has not changed people's sense of values.
 - B. The child labor laws of the 1830's and 1840's have not solved the basic problems of industrialization.
 - C. Industrialization has destroyed the independence and self-respect of the handloom weavers.
 - D. Cities have become smoky and dirty.
2. Oppem would disagree with which of the following statements?
 - A. Child labor laws are an indication of increased awareness of social problems.
 - B. Industrialization has produced more material goods than ever before.
 - *C. People had a stronger sense of justice before the Industrial Revolution.
 - D. Life is easier for everyone with industrialization.
3. Both Oppem and Pessim would agree that:
 - *A. industrialization has produced more material goods.
 - B. workers have not benefited from the Industrial Revolution.
 - C. society is ruled by the profit motive.
 - D. industrialization has destroyed the dignity and independence of large groups of people.
4. Why does Pessim consider the industrial towns to be indications of what is wrong with society in England in 1851? (*Answer:* According to Pessim, the towns have dirt, disease, slums, and misery because the people who built and run the factories care only about making a profit and not about anything else.)

5. Do you agree with Oppem’s statement that “once certain social problems have become more obvious, they are much more likely to be solved”? Why or why not? Do you think this is true from the evidence in the past few lessons? (Students’ answers will vary.)

Lesson 25: REACTIONS TO THE INDUSTRIAL REVOLUTION (text pages 88–93)

Overview of the Lesson

Throughout the early 1800’s and later, various groups in English society viewed the changes brought by the Industrial Revolution with alarm. This lesson discusses the reactions and goals of several of these groups. The Luddites were a group of handloom weavers who used violent methods to destroy the machines that threatened their way of life. The Owenites, led by the textile manufacturer Robert Owen, sought to establish small, self-sufficient communities as alternatives to the new industrial society. The Chartists and John Stuart Mill wanted to extend the right to vote to workers. Marxists sought to establish a socialist society by seeking working-class control of government—by violence if necessary. Finally, the labor unions’ aim was to improve workers’ wages and factory conditions through collective bargaining. The lesson ends with an activity requiring students to think about the goals and methods of these groups.

Learning Objectives

- To understand the concerns of people who recognized problems in the industrialization process.
- To become aware of movements for reform during the first half of the 1800’s.
- To evaluate the various programs of reform.

Key Words and Ideas

class	petition	socialism
communism	representation	suffrage
labor union	secret ballot	

Historical Background

Several of the movements discussed in this lesson failed in their goals, but the aims of the Chartists, the Marxists, and the early labor unions gained varying degrees of public support over the years. Luddite outbreaks flared up frequently in the first two decades of the 1800’s but disappeared in England after

1830. Robert Owen tried unsuccessfully to establish his villages of cooperation in the United States. He became popular with the workers in England in the 1830's but gradually lost influence. The Chartist movement collapsed after 1848. However, by the end of the First World War in 1918, all of the original Chartist proposals, except annual elections, had become law. Both Marxism and labor unionism had successes after 1850, although the influence of unions in England far outweighed that of Marxism.

Activities and Projects

Class discussion. Ask the students which of the following reactions to industrialization they think was the most effective and far-reaching: Owenism, Luddism, Marxism, Chartism, socialism, or labor unionism. Which do they think was the least effective? Why? Have the students state the reasons for their choices. Then compile the results on the blackboard. The student may recognize a relationship between the philosophy of each group and the course of action it espoused.

Individual research. The drawing on the bottom of text page 90 is a political cartoon commenting on Chartist efforts to have Parliament adopt their proposals. Political cartoons are effective means of conveying a viewpoint. During this period of English history, political cartoonists often commented on the various groups discussed in this lesson. Students can draw their own political cartoons depicting their personal views of the Marxists, the Chartists, the Owenites, the Luddites, and the labor union supporters. Student cartoons can also depict and contrast today's urban living conditions with those of England's industrial cities in the 1800's.

Using the Textbook Questions

Margin questions on text page 90. First question. The Luddites believed that the factories and new machines were the chief problem. The Owenites believed that the characteristics of an industrialized society—competition, large-scale industry, and the division of labor—were the main problems. The Chartists believed that the main problem with English industrial society was the lack of representation for the lower classes.

Second question. Answers to this question will vary according to student opinion.

Analyzing the Evidence: activity on text page 93. First question. The Luddites were greatly threatened by the new textile machines and factories. They wanted to return to the way life was before industrialization. So they attacked factory owners and tried to destroy the machines. They hoped to reverse the process of industrialization by violence and intimidation. The Luddites valued simple existence without factories and the new machines.

The Owenites believed that competition, large-scale industry, and the division of labor were problems of society brought on by industrialization. For

them, the solution was the establishment of villages of cooperation. The Owenites hoped that the villages would be successful and attractive and that more and more people would join them. They valued cooperation, small self-sufficient economic units, and an end to specialization.

The Chartists believed that workers needed parliamentary representation. As a solution, they sought to expand the franchise. By achieving this goal, they hoped to gain a fairer society. The Chartists valued political representation for all Englishmen.

To the Marxists, the exploitation of the workers by the propertied classes was the main problem of an industrial society. They sought an overthrow of the economic system, by violence if necessary. In its place, they hoped to establish an ideal society based on socialist economic theory. The Marxists valued a society in which there was no class system or private ownership of factories. The workers would both own and run the factories, and everyone would be paid according to need.

The labor unions wanted to improve working conditions and wages. They viewed collective bargaining with management as the best solution to these problems. Their goal was a higher living standard through better wages and working conditions, and they valued an equal voice with management in the determination of their working life.

The answers to the second question will vary according to student opinion.

Evaluating Student Progress

1. Which group favored violent methods to change existing society?
 - *A. Marxists
 - B. Chartists
 - C. Owenites
 - D. Labor unions
2. Which group sought a return to the way of life that existed before the Industrial Revolution?
 - A. Labor unions
 - *B. Luddites
 - C. Owenites
 - D. Marxists
3. Which group was most concerned with political and voting rights?
 - A. Luddites
 - B. Marxists
 - C. Owenites
 - *D. Chartists
4. Was Marx correct about workers' wages falling to the survival level during the years 1790 to 1850? Cite any evidence you can remember from previous lessons. (*Answer:* Marx was wrong. According to the wage and price index for these years featured in Lesson 21, workers' wages rose considerably — 41% — while prices fell 16% by the year 1850.)

5. What were some of the main philosophical differences between Owen and Marx? (*Answer:* Marx stressed violent class conflict, while Owen did not mention class division. He believed that socialism would eventually come peacefully. Owen further opposed the division of labor and specialization, but Marx took no stand on these issues.)

Lesson 26: THE INDUSTRIAL REVOLUTION TODAY (text pages 94–96)

Overview of the Lesson

This lesson considers the implications of the Industrial Revolution for the developing countries of today's world. Mohandas Gandhi and Jawaharlal Nehru of India speak from the knowledge of the effects of industrialization during the last 200 years. Yet they express opposing views. Gandhi maintains that a traditional non-industrial society is healthier for the individual and for society as a whole, while Nehru asserts that industrialization strengthens a country by raising living standards and by enabling it to achieve economic and political independence. The activity in this lesson asks the students to express their own views about the major questions of this Unit.

Learning Objectives

- To understand the arguments in support of or in opposition to the spread of industrialization to undeveloped countries.
- To consider the costs and benefits of industrialization in our lives.

Activities and Projects

Small-group project. Divide the class into three groups. One group can be a “think tank” of experts specializing in underdeveloped areas of Latin America. The second group can specialize in Asia, the third in Africa. The teacher should pick one country from each of these areas and choose three students to be the heads of state of these countries. The head of each state will then ask its “think tank” to prepare a paper on the possible effects of industrialization on its country. Group members should familiarize themselves with the country's history, economy, geography, population, and natural resources. Then each group should submit a list of recommendations for the country's course of action and the costs and benefits of industrialization to that country.

Class discussion. Have the class consider the photographs on text pages 94–96. You may wish to initiate a discussion asking the students to contribute what they know about industrialization in the countries pictured in the photographs. What questions would they need to ask about the people in each of those coun-

tries before they could make a judgment about the costs and benefits of industrialization? Students may wish to review their lists of the ingredients of industrialization. They might also want to bring photographs to class of other countries undergoing industrialization or of those relatively undeveloped. Good sources of pictures would be newspapers and newsweeklies.

Class debate. Have students debate the proposition: “Resolved: The industrialization of the last 50 years has benefited American society as a whole.” Choose two debating teams – one to support and one to oppose the proposition. Each team should research and prepare its arguments for a debate in front of the class. After the debate, the class should vote on which team presented the more persuasive arguments.

Evaluating Student Progress

1. One of Gandhi’s basic beliefs was that:
 - A. industrialization should be encouraged.
 - *B. people can be happy without material goods.
 - C. cottage industries and old farming methods should be eliminated.
 - D. competition is a good thing.
2. One of Nehru’s basic beliefs about industrialization was that:
 - A. traditional methods of production are the best.
 - B. India needs to rely on its more powerful neighbors.
 - *C. India needs industrialization so it can be economically independent of more powerful nations.
 - D. India should not accept the implications of new technology.
3. Which of the following statements is false?
 - A. Nehru considered India’s relations with the outside world, while Gandhi did not.
 - *B. Nehru wanted India independent, while Gandhi preferred that India remain dependent on Great Britain.
 - C. Nehru believed that technological progress brings prosperity and economic independence, while Gandhi did not.
 - D. Gandhi believed that societies can be happy without dependence on material goods, while Nehru disagreed to some extent.
4. According to these readings, what did Gandhi care about most? What did Nehru care about most? (*Answer:* Gandhi rejected industrialization as the answer to India’s problems. He wanted the country to retain its old ways so that the Indian people could achieve spiritual contentment and independence. He believed that machinery, material goods, and the competition of industrialization eroded moral fiber. Nehru wanted India to achieve its independence by developing its economic resources. If industrial technology was the way to achieve a higher standard of living for all Indians, then India had to face the consequences of industrialization—consequences both good and bad. Both men had India’s best interests in mind, but each saw different means of achieving the best for his country.)

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